

NCS

Reference Material

(2025-2026)



NATIONAL ANALYSIS CENTER FOR IRON & STEEL
NCS Testing Technology Co., Ltd.

Introduction

National Analysis Centre for Iron and Steel (NACIS) is a research and development centre of analysis & test technology for iron and steel. It is an arbitration centre of material analysis, a promoting and training centre for new analysis technology. NACIS is responsible for management of national chemical standard analysis methods of iron, steel, alloy in P. R China.

Based on China Iron and Steel Research Institute group, The largest Institute in China, NACIS has advanced equipment and technology for analysis inspection.

NACIS has a long history in research of a wide variety of reference materials and production of metal, alloy, ore, ferrous alloy CRMs etc.. NACIS which is the earliest CRM producer in China from 1952 is a comprehensive unit for CRM production, accreditation and sales. NACIS has enough qualified staffs for CRM production and quality control.

From 1980, NACIS entered the international CRM market and up to now has distributors in more than 20 countries like Japan, Germany, United States, Sweden etc.. In national CRMs market, NACIS holds the largest market share and has 35 distributors.

The CRMs in this catalog are the CRMs from many producers under NACIS accreditation. You can also get CRMs which are available in China from NACIS even not listed in this catalog.

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Section 1 Iron, Steel & Alloy(Chip)

1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co		
NCS HC 11003	Cast Iron	3.77	1.47	0.659	0.230	0.129									100	
NCS HC 11003a	Cast Iron	3.36	1.39	0.561	0.166	0.176									100	
NCS HC 11003b	Cast Iron	3.36	1.82	0.386	0.135	0.154									100	
NCS HC 11004	Cast Iron	2.72	2.56	0.359	0.124	0.115									100	
NCS HC 11005	Cast Iron	2.19	3.07	0.219	0.047	0.048									100	
NCS HC 11006	Cast Iron	3.11	1.37	0.850	0.270	0.130									100	
NCS HC 11007	Pig Iron	2.70	1.72	1.66	0.201	0.102	0.589		0.031		0.0067	0.014			100	
NCS HC 11008	Pig Iron	1.90	2.72	1.96	0.060	0.097	0.766		0.041		0.0075	0.013			100	
NCS HC 11011b	Pure Iron	0.0023	0.0023	0.013	0.0014	0.0014	0.0066	0.0027	0.0045	(<0.0001)	(<0.0001)	(<0.0001)	0.00030	0.0012	50	
NCS HC 11012	High Chromium Cast Iron	1.95	0.59	0.926	0.0084	0.0079	13.11				0.137	0.064	0.52		100	
NCS HC 11013	High Chromium Cast Iron	2.35	1.05	1.05	0.010	0.0094	15.06				0.16	0.062	2.84		100	
NCS HC 11011b	Pure Iron	N	Zn	Sb	Sn	As	B	Ca	Bi	Mg	Pb	Nb	W	Ta		
		0.0045	0.00015	0.00029	0.00015	0.0026	0.00023	0.0003	(<0.00001)	(0.00006)	(0.00002)	(0.00004)	(0.00004)	(<0.00001)		
		La [#]	Se [#]	Cd [#]	Te [#]	Zr [#]	Ce [#]	Hf [#]								
NCS HC 11011b	Pure Iron	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002								
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	B	Ti	Co	V	W	Unit Size (in g)	
NCS HC 11015	Rare Earth Magnesium Cast Iron	2.74	2.32	0.473	0.022	0.0009	0.040	0.627	0.031	0.0030	0.015	0.011	0.031	0.0032	80	
NCS HC 11016	Pig Iron	2.99	1.67	0.431	0.048	0.033	0.249	1.02	0.03	0.0045	0.092		0.012	0.0043	100	
NCS HC 11017	Pig Iron	3.81	1.56	0.262	0.048	0.055	0.278	0.324	0.394	0.015	0.042		0.093	0.119	100	
NCS HC 11015	Rare Earth Magnesium Cast Iron	Mo	Mg	Sn	N	La	Ce	Als	As	R _E	Sb	Nb	Alt			
		0.0016	0.012	0.0037	0.0047	0.013	0.019	0.021	0.011	0.036	(0.0005)					
		0.297		0.0054				0.0053	0.0101		0.0032	0.0061	0.0059			
NCS HC 11016	Pig Iron	0.196		0.06				0.116	0.0043		0.026	0.02	0.119			
NCS HC 11017	Pig Iron															
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo				
NCS HC 13004	High Chromium Cast Iron	2.46	0.320	1.63	0.383	0.012	12.95	0.122	0.73	0.026	0.0092	0.76			100	
NCS HC 13005	High Chromium Cast Iron	2.86	0.365	1.07	0.058	0.028	22.53	0.250	0.42	0.039	0.005	1.14			100	
NCS HC 13006	High Chromium Cast Iron	2.31	0.59	0.828	0.064	0.043	26.48	0.49	0.355	0.040	0.0053	2.70			100	
NCS HC 13007	Alloy Cast Iron	3.95	1.30	0.271	0.129	0.233	4.31	0.029	0.011	0.012	0.016	0.36			100	
NCS HC 13008	Alloy Cast Iron	3.46	3.15	1.05	0.252	0.062	0.202	0.132	0.263	0.0070	0.047	0.047			100	
NCS HC 13010	Alloy Cast Iron	3.35	2.44	0.699	0.147	0.045	0.96	0.300	0.018			2.39			100	
NCS HC 13011	Alloy Cast Iron	3.23	4.30	1.20	0.310	0.045	1.36	0.919	0.243			0.639			100	
NCS HC 13013	Iron Powder	0.0041	0.018	0.126	0.0085	0.021									150	
NCS HC 13015	Pig Iron	2.51	4.08	0.62	0.104	0.020									150	
NCS HC 13016	Pig Iron	2.99	1.29	1.30	0.278	0.100									150	
NCS HC 13020	Pig Iron	2.72	1.32	0.508	0.105	0.024									100	
NCS HC 13021	Pig Iron	2.52	1.41	1.46	0.273	0.060									100	
NCS HC 13022	Pig Iron	2.85	3.02	0.821	0.071	0.027									100	
NCS HC 13024	Pig Iron	1.88	4.13	0.472	0.160	0.034									100	
NCS HC 13025	Pig Iron	2.51	2.28	0.301	0.087	0.081									100	
NCS HC 13026	Cast Iron	1.28	0.644	0.741	0.0285	0.0054	21.12	1.12	0.044	0.287	0.060	0.335			100	
NCS HC 13027	Cast Iron	1.34	0.843	0.969	0.0310	0.0035	22.40	1.60	0.028	0.035	0.106	0.546			100	
NCS HC 13028	Cast Iron	1.58	1.11	1.37	0.032	0.0038	24.73	2.07	0.0290	0.032	0.184	0.842			100	
Number	Name	C	Si	Mn	P	S	Cu									Unit Size (in g)
NCS HC 14003	Pig Iron	2.03	1.50	0.402	0.077	0.042	0.085									100

Section 1 Iron, Steel & Alloy(Chip)

1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co		
NCS HC 15002g	Pure Iron	0.0013	0.0014	0.00018	(0.0001)	0.001	0.00019	0.0052	0.00024	0.00065	(0.0001)	(0.0001)	0.0033	(0.0001)	15	
NCS HC 15006	Pure Iron	0.080	0.171	0.043	0.0159	0.0075	0.043	0.147	0.135	0.088					100	
NCS HC 15011	Pig Iron	2.58	2.76	1.00	0.087	0.068					N				100	
NCS HC 15014	Pure Iron(DT ₄)	0.0208	0.0922	0.246	0.0121	0.007	0.013	0.0202	0.020	0.046					100	
		Chemical Composition(Percent)														
		Ca	Mg	Cd	Zn	As	Sb	Bi	Sn	Pb						
NCS HC 15002g	Pure Iron	0.0017	0.00022	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)						
NCS HC 15014	Pure Iron(DT ₄)					0.0002	0.0005		0.0012	0.000085						
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cu	Cr	Ni	Al	N					
NCS HC 15016	Pure Iron	0.022	0.199	0.201	0.0072	0.0027	0.066	0.032	0.066	0.217	0.0123				100	
NCS HC 15017	Pure Iron	0.061	0.166	0.319	0.04	0.005	0.02	0.022	0.02	0.284	0.0146				100	
NCS HC 15018	Pure Iron	0.022	0.422	0.436	0.036	0.0032	0.2	0.205	0.323	0.515				100		
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cu	Ti								
NCS HC 16003b	Pig Iron	3.53	1.83	1.10	0.066	0.048	0.258	0.025								100
NCS HC 16006	Pig Iron	2.809	0.856	1.48	0.039	0.062	0.045	0.0118								100
NCS HC 16006b	Pig Iron	2.71	1.14	0.98	0.077	0.089	0.036	0.007								100
NCS HC 16008	Pig Iron	3.58	1.59	1.66	0.039	0.044	0.024	0.030								100
NCS HC 16008b	Pig Iron	3.45	1.44	1.84	0.046	0.018	0.015	0.019								100
NCS HC 16009	Pig Iron	2.202	0.378	0.528	0.0226	0.080	0.063	0.0094								100
NCS HC 16009b	Pig Iron	2.31	2.28	0.509	0.025	0.100	0.038	0.030								100
NCS HC 16010b	Pig Iron	3.90	0.93	0.414	0.044	0.044	0.010	0.001								100
NCS HC 16001b	Pig Iron	3.04	1.34	1.22	0.072	0.052	0.025	0.008								100
NCS HC 16002b	Pig Iron	2.38	0.48	0.700	0.082	0.034	0.026	0.006								100
NCS HC 16004b	Pig Iron	3.39	3.41	0.94	0.113	0.016	0.202	0.058								100
NCS HC 16022	Pig Iron	2.83	2.19	0.721	0.094	0.067								100		
NCS HC 16023	Pig Iron	3.8	1.42	0.929	0.171	0.016								150		
NCS HC 16024	Pig Iron	3.59	1.96	0.514	0.315	0.033								150		
NCS HC 16026	Pig Iron	3.22	2.25	0.726	0.085	0.059								150		
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Sn	Zn		
NCS HC 16027	Pig Iron	4.06	0.725	0.094	0.038	0.029	0.010	0.0023	0.0023	0.0064	0.026	0.0027	0.00014	(0.0003)	100	
NCS HC 16028	Pig Iron	4.00	1.55	0.634	0.046	0.0073	0.036	0.0045	0.0051	0.018	0.084	0.0089	0.00018	(0.0002)	100	
		Pb	Bi	Sb	As											
NCS HC 16027	Pig Iron	<0.0002	<0.00005	0.00013	0.0011											100
NCS HC 16028	Pig Iron	<0.0002	<0.00005	0.00016	0.0012											100
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	As	RE	Mg							
NCS HC 18002	Cast Iron	2.67	2.94	1.36	0.051	0.031										150
NCS HC 18005	Pig Iron	2.89	2.01	0.733	0.108	0.0058	0.091									100
NCS HC 18006	Pig Iron	2.65	1.99	0.75	0.114	0.0057	0.092									100
NCS HC 18008	Pig Iron	4.13	1.02	0.348	0.078	0.023	0.016									100
NCS HC 18009	Pig Iron	3.83	1.88	0.74	0.186	0.023	0.025									100
NCS HC 18010	Pig Iron	3.66	2.40	0.59	0.145	0.041	0.036	0.024	0.030							100
NCS HC 18011	Pig Iron	3.43	1.93	0.729	0.079	0.0082	0.036									100
NCS HC 18012	Pig Iron	3.23	1.93	0.74	0.079	0.0080	0.037									100
NCS HC 18013	Pig Iron	3.40	2.12	0.79	0.049	0.0087	0.013									100
NCS HC 18014	Pig Iron	3.36	2.136	0.792	0.049	0.0087	0.012									100
NCS HC 18016	Pig Iron	3.20	2.91	0.42	0.104	0.0092	0.092									100

Section 1 Iron, Steel & Alloy(Chip)

1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	
NCS HC 19002	V Ti Pig Iron	3.00	1.42	0.869	0.048	0.145	0.033	0.027	0.066	0.29	0.254		100
NCS HC 19004	V Ti Pig Iron	2.38	2.12	1.28	0.069	0.0077	0.039	0.028	0.070	0.40	0.314		100
NCS HC 19007	Nodular Cast Iron	2.855	2.615	0.977	0.050	0.021	0.0433	0.032	0.046	0.536	0.106		100
NCS HC 19008	Nodular Cast Iron	2.486	2.529	0.734	0.080	0.015	0.0425	0.030	0.044	0.394	0.096		100
NCS HC 19010	V Ti RE Spherulitic Iron	2.69	2.92	0.79	0.029	0.023	0.227	0.025	0.042	0.236	0.109	0.0016	100
NCS HC 19016	V Ti Pig Iron	2.21	3.78	0.420	0.014	0.012	0.040	0.032	0.047	0.310	0.066		100
NCS HC 19017	V Ti Pig Iron	2.77	2.52	0.570	0.015	0.014	0.042	0.031	0.046	0.356	0.072		100
NCS HC 19018	V Ti Pig Iron	2.70	3.10	0.625	0.024	0.011	0.043	0.031	0.049	0.405	0.125		100
		Co	Ca	Mg	RE								
NCS HC 19002	V Ti Pig Iron	0.033	0.0079										
NCS HC 19004	V Ti Pig Iron	0.034	0.0073										
NCS HC 19007	Nodular Cast Iron	0.036		0.036	0.040								
NCS HC 19008	Nodular Cast Iron	0.035		0.0106	0.0185								
NCS HC 19010	V Ti RE Spherulitic Iron			0.028	0.040								
NCS HC 19016	V Ti Pig Iron	0.037		0.090	0.099								
NCS HC 19017	V Ti Pig Iron	0.037		0.067	0.070								
NCS HC 19018	V Ti Pig Iron	0.035		0.071	0.083								
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Ti			Unit Size (in g)
NCS HC 28013	Cast Iron	2.65	2.29	0.575	0.450	0.098	0.041	0.0675	0.086	0.041			150
NCS HC 28014	Cast Iron	3.05	2.67	0.57	0.300	0.079	0.022	0.018	0.194				150
NCS HC 28015	Cast Iron	3.58	3.02	0.97	0.080	0.014	0.0075	0.0125	0.091				150
Number	Name	C	Si	Mn	P	S	Cr	Cu	V	Ti	Mo		Unit Size (in g)
NCS HC 28025	High Phosphorus Cast Iron	2.98	1.80	0.698	1.80	0.087	0.081	0.201					150
NCS HC 28026	High Phosphorus Cast Iron	2.91	1.81	0.702	1.91	0.124	0.086	0.245					150
NCS HC 28028	Alloy Cast Iron	3.11	1.71	0.605	0.250	0.088	0.280	1.03	0.023	0.0494			100
NCS HC 28029	Alloy Cast Iron	2.84	1.91	0.85	0.086	0.0995	0.316	0.865	0.017	0.033			100
NCS HC 28034	Alloy Cast Iron	3.15	1.67	0.795	0.321	0.082	0.464	1.04		0.053	0.515		100
NCS HC 28035	Alloy Cast Iron	3.15	1.44	0.685	0.49	0.076		0.915					100
NCS HC 28041	Rare Earth Cast Iron	1.59	2.13	0.44	0.067	0.004	0.052	0.024					150
Number	Name	C	S	Si	Mn	P	Cr	Ni	Mo	Nb	Mg		Unit Size (in g)
NCS HC 28054	Alloy Cast Iron	3.01	0.011	2.03	0.645	0.188	0.619	1.19	0.355	0.095	0.047		100
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo			Unit Size (in g)
NCS HC 37001	High Chromium Cast Iron	3.40	1.35	0.89	0.060	0.054	13.54	0.63	1.22	1.03			80
NCS HC 37002	High Chromium Cast Iron	3.42	1.05	0.71	0.058	0.064	8.93	0.23	0.90	1.74			80
NCS HC 37003	High Chromium Cast Iron	2.95	1.32	1.72	0.062	0.034	15.39	1.05	1.06	1.12			80
Number	Name	C	Si	Mn	P	S	Cr	Cu	Mo	Mg	R _e	Bi	Unit Size (in g)
NCS HC 37005	R _e -Mg Spherulitic Iron	1.92	3.36	0.955	0.041	0.0064		0.181	0.128	0.073	0.059		80
NCS HC 37008	R _e -Mg Spherulitic Iron	2.59	3.08	0.373	0.042	0.012		0.288	0.514	0.014	0.011		80
NCS HC 37011	Cast Iron	3.73	2.58	0.565	0.117	0.067							80
NCS HC 37013	Wrought Iron	2.11	1.70	0.353	0.167	0.139	0.119					0.0025	80
NCS HC 37018	Manganese Spherulitic Iron	2.78	5.96	6.80	0.12	0.0027				0.049	0.041		80
NCS HC 37019	Manganese Spherulitic Iron	3.06	5.80	6.72	0.11	0.0041				0.054	0.049		80
NCS HC 37020	Manganese Spherulitic Iron	2.88	3.75	6.40	0.11	0.0035				0.068	0.047		80
NCS HC 37021	Manganese Spherulitic Iron	2.79	6.58	8.77	0.10	0.0060				0.028	0.045		80

Section 1 Iron, Steel & Alloy(Chip)

1)Pure Iron, Pig Iron, Cast Iron

Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S	Cr	Ni	Cu	V	Co			
NCS HC 28057	Nickel-iron	2.15	4.10	0.065	0.020	0.235	2.77	12.25	0.022	0.034	0.226	75		
NCS HC 28059	Nickel-iron	2.17	2.72	0.066	0.014	0.276	1.71	13.96	0.038	0.027	0.320	75		
NCS HC 28056	Low Phosphorus Pig Iron	3.98	1.15	0.128	0.06	0.0185						100		
NCS HC 28060	Nickel Pig Iron	2.81	5.63	0.82	0.052	0.011	3.65	5.45	0.015	0.039	0.257	50		
NCS HC 28061	Nickel Pig Iron	3.46	2	0.523	0.059	0.034	4	7.6	0.0093	0.026	0.396	50		
NCS HC 28062	Nickel Pig Iron	1.53	5.05	0.091	0.044	0.68	1.86	16.07	0.026	0.026	0.26	50		
NCS HC 28063	Nickel Pig Iron	2.94	4.38	0.83	0.066	0.013	3.59	6.16	0.016	0.039	0.287	50		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S	Cr	Ni	Cu	Mo	Bi	V	Ti	
NCS HC 37029	Pig Iron	2.15	2.69	1.08	0.451	0.068	0.221		0.752					100
NCS HC 37030	Pig Iron	2.22	2.20	0.869	0.339	0.101	0.142		0.501					100
NCS HC 37036	Cast Iron	1.67	1.90	1.05	0.085	0.024	0.055				0.0034			100
NCS HC 37037	Cast Iron	1.90	2.34	0.780	0.110	0.055	0.024				0.0038			100
NCS HC 37038	Cast Iron	2.01	1.44	0.677	0.057	0.115	0.113				0.0015			100
NCS HC 37039	Cast Iron	2.04	3.37	1.34	0.479	0.038	0.197		0.642					100
NCS HC 37040	Cast Iron	2.15	2.69	1.08	0.451	0.068	0.221		0.752					100
NCS HC 37041	Cast Iron	2.22	2.20	0.869	0.339	0.101	0.142		0.501					100
NCS HC 37042	Cast Iron	2.04	1.86	0.670	0.226	0.103	0.054		0.176					100
NCS HC 37043	Cast Iron	2.28	1.34	0.358	0.086	0.161	0.028		0.041					100
NCS HC 37051	Cast Iron	2.69	0.59	0.65	0.072	0.088	10.51	0.43	0.63	0.50		0.56	0.013	50
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S	B							
NCS HC 39001	Cast Iron	2.85	2.48	0.38	0.081	0.096								100
NCS HC 39002	Cast Iron	2.81	1.71	0.57	0.062	0.134								100
NCS HC 39003	Cast Iron	2.95	1.49	0.26	0.143	0.085								100
NCS HC 39004	Cast Iron	2.78	2.17	0.78	0.066	0.082								100
NCS HC 39008	Cast Iron	2.59	2.17	0.859	0.187	0.093								100
NCS HC 39009	Cast Iron	2.47	3.33	1.56	0.318	0.057								100
NCS HC 39010	Cast Iron	2.65	1.29	0.331	0.113	0.134								100
NCS HC 39011	Boron Cast Iron	2.96	1.67	0.57	0.082	0.058	0.061							100
NCS HC 39013	Boron Cast Iron	2.86	2.35	0.56	0.106	0.052	0.101							100
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S	Cr	Ni	Cu	V	Ti	Mo		
NCS HC 41010	Cast Iron	2.64	1.49	0.540	0.089	0.029	0.086	0.030	0.056	0.011	0.024	0.021		150
NCS HC 41011	Cast Iron	2.64	2.23	0.725	0.177	0.033	0.151	0.035	0.146	0.014	0.031	0.105		150
NCS HC 41012	Cast Iron	2.52	3.86	1.24	0.635	0.032	0.115	0.037	0.114	0.017	0.033	0.071		150
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S								
NCS HC 93001	pig iron	4.01	1.49	1.15	0.097	0.069								100
Numberw	Name	C	S	Si	Mu	Chemical Composition(Percent)							Unit Size (in g)	
						P	Cr	Ni	Mo	Cu	Ti	Σ Re	V*	
NCS HC 93002	Alloy cast iron	1.82	0.097	3.54	1.84	0.072	0.6	0.95	0.16	0.24	0.46	0.024	0.2	100
NCS HC 93003	Alloy cast iron	2.4	0.084	2.47	1.19	0.072	0.97	0.23	0.11	2.18	0.13	0.025	0.16	100
NCS HC 93004	Alloy cast iron	3.28	0.018	2	0.48	0.34	0.21	0.33	1.1	0.82	0.035	0.01	0.06	100
NCS HC 93005	Alloy cast iron	2.76	0.058	1.37	0.69	0.14	0.39	0.59	0.65	1.36	0.15	0.007	0.3	100
NCS HC 93006	Alloy cast iron	2.64	0.079	1.21	0.29	0.43	1.92	2.65	0.25	0.35	0.029	0.044	0.02	100
NCS HC 93007	Alloy cast iron	3.94	0.028	0.82	0.14	0.058	0.14	1.56	0.42	0.49	0.08	0.027	0.58	100

Section 1 Iron, Steel & Alloy(Chip)

2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Al _t	Ti _t	
NCSHC 11101	Carbon Steel,10 #	0.127	0.219	0.481	0.017	0.024	0.0058	0.015	0.257						150
NCSHC 11102	60Mn	0.56	0.72	0.69	0.016	0.004	0.102	0.60	0.041						150
NCSHC 11102a	60Mn	0.61	0.24	0.82	0.023	0.014	0.015	0.028	0.016						150
NCSHC 11103	Carbon Steel	0.183	0.277	0.622	0.029	0.011	0.028	0.033	0.185						150
NCSHC 11110	Carbon Steel,25 #	0.239	0.187	0.552	0.014	0.018	0.026	0.039	0.202						150
NCSHC 11110a	Carbon Steel,25 #	0.242	0.260	0.506	0.014	0.023	0.078	0.048	0.119						150
NCSHC 11111	Easy Cutting Steel	0.188	0.114	0.64	0.015	0.119	0.016	0.037	0.031						150
NCSHC 11111a	Easy Cutting Steel	0.72	0.22	0.37	0.13	0.13									150
NCSHC 11111b	Easy Cutting Steel	0.09	0.27	0.96	0.094	0.12	0.090	0.049	0.091						150
NCSHC 11112	Carbon Steel,20 #	0.183	0.105	0.632	0.007	0.016	0.172	0.108	0.106						150
NCSHC 11115	Carbon Steel,15 #	0.136	0.054	0.317	0.007	0.011	0.026	0.017	0.028						150
NCSHC 11116	15Mn	0.156	0.277	0.879	0.015	0.0105	0.058	0.054	0.124						150
NCSHC 11118	Carbon Steel	0.23	0.25	0.55	0.026	0.0035									150
NCSHC 11119	65Mn	0.68	0.30	1.11	0.018	0.009	0.066	0.037	0.11						150
NCSHC 11120	Carbon Steel,35 #	0.338	0.262	0.555	0.016	0.014	0.155	0.072	0.140						150
NCSHC 11121	25MnSi	0.234	0.508	1.33	0.021	0.029	0.056	0.046	0.067						150
NCSHC 11122	20MnSi	0.201	0.748	1.32	0.026	0.027									150
NCSHC 11124	Carbon Steel	0.109	0.520	0.750	0.034	0.010	0.206	0.121	0.243	Als0.031	0.254	Tis0.015	0.036	0.016	150
NCSHC 11125	Carbon Steel	0.341	0.416	0.923	0.051	0.010	0.069	0.143	0.187	Als0.067	0.136	Tis0.054	0.072	0.055	150
NCSHC 11126	Carbon Steel	0.664	0.164	1.25	0.071	0.028	0.073	0.240	0.142	Als0.097	0.077	Tis0.093	0.099	0.093	150
NCSHC 11127	Carbon Steel	1.03	0.176	1.63	0.086	0.030	0.063	0.320	0.122	Als0.171	0.031	Tis0.154	0.174	0.156	150
NCSHC 11128	Carbon Steel	1.23	0.805	1.87	0.093	0.032	0.321	0.445	0.082	Als0.202	0.011	Tis0.263	0.206	0.266	150
NCSHC 11130	Carbon Steel	0.157	0.114	0.211	0.034	0.037	0.12	0.066	0.047	0.045	0.163	0.071			150
NCSHC 11132	Carbon Steel	0.464	0.814	0.376	0.062	0.043	0.20	0.36	0.295	0.131	0.156	0.157			150
NCSHC 11133	Carbon Steel	0.582	0.389	0.891	0.050	0.019	0.16	0.18	0.227	0.056	0.023	0.083			150
NCSHC 11134	Carbon Steel	0.741	0.821	1.39	0.012	0.056	0.016	0.016	0.0154	0.0025	0.157	0.006			150
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	As					
NCSHC 13101	Carbon Steel	0.725	0.24	1.28	0.016	0.030									150
NCSHC 13102	Carbon Steel	0.295	0.255	0.506	0.019	0.030	0.0062	0.0039	0.005						100
NCSHC 13103	Carbon Steel	0.409	0.261	0.629	0.0127	0.032	0.0076	0.0073	0.0087						100
NCSHC 13104	Carbon Steel	0.239	0.242	0.490	0.014	0.024	0.013	0.015	0.017						100
NCSHC 13105	Carbon Steel	0.153	0.222	0.457	0.0062	0.026	0.013	0.010	0.023						100
NCSHC 13106	Carbon Steel	0.480	0.271	0.653	0.016	0.028	0.0088	0.0055	0.0061						100
NCSHC 13107	Carbon Steel,30 #	0.30	0.26	0.51	0.019	0.030	0.0061	0.0038	0.0054						100
NCSHC 13108	Carbon Steel,40 #	0.41	0.26	0.63	0.013	0.032	0.0076	0.0074	0.0087						100
NCSHC 13109	Carbon Steel,25 #	0.24	0.24	0.49	0.014	0.024	0.013	0.015	0.017	0.0022					100
NCSHC 13110	Carbon Steel,15 #	0.15	0.22	0.46	0.0062	0.026	0.013	0.010	0.023	0.0034					100
NCSHC 13111	Carbon Steel,60 #	0.59	0.25	0.73	0.0098	0.025	0.014	0.008	0.015	0.0019					100
NCSHC 13112	Carbon Steel,50 #	0.48	0.27	0.65	0.016	0.028	0.009	0.006	0.006	0.0011					100
NCSHC 13114	Carbon Steel,45 #	0.47	0.26	0.70	0.019	0.030	0.008	0.004	0.006	0.005					100
NCSHC 13116	Carbon Steel	0.42	0.36	1.11	0.084	0.049									100
NCSHC 13118	Carbon Steel	0.72	0.66	0.56	0.063	0.010									100
NCSHC 13121	Carbon Steel	0.33	0.62	0.41	0.036	0.012									100

Section 1 Iron, Steel & Alloy(Chip)

2)Non-Alloy Steel

Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Ni	Cr	Cu	As	Als			
NCS HC 13122	Carbon Steel	0.29	1.43	1.16	0.017	0.012	0.008	0.015	0.006	0.0022	0.063	100		
NCS HC 13124	Carbon Steel	0.60	0.31	0.89	0.018	0.017	0.007	0.013	0.006	0.0022	0.056	100		
NCS HC 13125	Carbon Steel	0.68	0.36	0.61	0.017	0.014	0.004	0.012	0.005	0.0022	0.031	100		
NCS HC 13126	Carbon Steel	0.71	0.30	1.02	0.020	0.017	0.005	0.013	0.006	0.0023	0.040	100		
NCS HC 13127	Carbon Steel	0.71	0.33	1.29	0.019	0.010	0.007					100		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni						
NCS HC 14102	Carbon Steel	0.542	0.140	0.520	0.0205	0.022	0.237	0.031				100		
NCS HC 14104	Carbon Steel	0.477	0.203	0.674	0.0244	0.031	0.0023	0.036				100		
NCS HC 14105	Carbon Steel	0.596	0.303	0.699	0.0193	0.0085	0.0052	0.026				100		
Numberw	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni	Cu					
NCS HC 15101	Carbon Steel	0.118	0.252	0.483	0.0132	0.017	0.020	0.020	0.022			150		
NCS HC 15103	Carbon Steel	0.454	0.283	0.636	0.0223	0.010	0.016	0.0083	0.009			150		
NCS HC 15105	Carbon Steel	0.467	0.295	0.624	0.027	0.012						100		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S								
NCS HC 16101	Carbon Steel	0.472	0.261	0.657	0.0136	0.012						150		
NCS HC 16102	Carbon Steel	0.206	0.238	0.551	0.0103	0.009						150		
NCS HC 16103	Carbon Steel	0.343	0.276	0.636	0.0144	0.010						150		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni	Cu					
NCS HC 18101	Carbon Steel	0.168	0.318	0.605	0.028	0.019	0.315	0.275	0.308			150		
NCS HC 18102	Carbon Steel	0.585	0.564	0.748	0.052	0.042	0.100	0.097	0.116			150		
NCS HC 18103	Carbon Steel	0.474	0.269	0.658	0.023	0.024	0.246	0.181	0.175			150		
NCS HC 18104	Carbon Steel	0.324	0.252	0.573	0.033	0.016	0.124	0.036	0.203			150		
NCS HC 18105	20MnSi	0.219	0.545	1.54	0.046	0.035	0.031	0.029	0.094			100		
NCS HC 18106	Q235 Steel	0.203	0.254	0.418	0.011	0.022	0.033	0.022	0.078			100		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni	Cu	Al	Ti	Co		
NCS HC 19101	Carbon Steel	0.458	0.347	0.655	0.0195	0.016							100	
NCS HC 19102	Carbon Structure Steel	0.73	0.243	1.22	0.014	0.030	0.015	0.029	0.078	0.012	0.0034	0.038	100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)							Unit Size (in g)	
						S	Cr	Ni	Cu					
NCS HC 20104	Carbon Steel	0.181	0.294	0.147	0.0084	0.060	0.290	0.107	0.083				100	
NCS HC 20106	Carbon Steel	0.341	0.194	0.585	0.012	0.028	0.220	0.055	0.209				100	
NCS HC 20108	Carbon Steel	0.303	0.323	0.649	0.022	0.012	0.059	0.033	0.114				100	
NCS HC 20112	Carbon Steel	0.484	0.297	0.611	0.022	0.0082	0.052	0.0451	0.088				100	
NCS HC 20113	20MnSi	0.199	0.595	1.46	0.024		0.143	0.079	0.157				100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni	Cu	Al	W	Mo	Sn	
NCS HC 21101	Carbon Steel	0.113	0.239	0.452	0.011	0.012	0.027	0.026	0.079					100
NCS HC 21102	Carbon Steel	0.228	0.279	0.516	0.020	0.021	0.071	0.029	0.080					100
NCS HC 21103	Carbon Steel	0.449	0.317	0.660	0.019	0.014	0.066	0.033	0.088	0.012	0.0055	0.0093	0.0114	100
NCS HC 21104	20MnSi	0.205	0.759	1.376	0.0225	0.0268	0.108	0.096	0.121		0.033	0.036		100
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)		
						S	Cr	Ni	Cu	Al	V	Ti		
NCS HC 22101	Carbon Steel	0.091	0.266	0.569	0.0123	0.031	0.093	0.241	0.196	0.095	0.011	0.0098		100
NCS HC 22102	Carbon Steel	0.188	0.150	0.461	0.0269	0.052	0.128	0.175	0.268	0.048	0.0048	0.028		100
NCS HC 22103	Carbon Steel	0.338	0.475	0.856	0.038	0.012	0.270	0.042	0.053	0.0079	0.0026	0.0030		100

Section 1 Iron, Steel & Alloy(Chip)

2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	Co	Sn		
NCS HC 28104	Carbon Steel	0.327	0.300	0.511	0.0214	0.023	0.024	0.036	0.212	0.051	0.0060	0.0011	0.049	100	
NCS HC 28106	Carbon Steel	0.736	0.292	0.673	0.0320	0.019	0.0064	0.010	0.028	0.036	0.0031	0.0076	0.0013	100	
NCS HC 28107	Carbon Steel	0.523	0.287	0.726	0.0101	0.017	0.026	0.022	0.030	0.021	0.0025	0.0077	0.00085	100	
NCS HC 28108	Carbon Steel	0.090	0.153	0.600	0.0165	0.025	0.0125	0.0090	0.021					100	
NCS HC 28110	Carbon Steel	0.204	0.253	0.441	0.028	0.025	0.012	0.0059	0.0215					100	
NCS HC 28113	Carbon Steel	0.463	0.262	0.638	0.0195	0.020	0.070	0.039	0.115					100	
NCS HC 28114a	Carbon Steel	0.736	0.297	0.67	0.032	0.019	0.0065	0.010	0.028					100	
NCS HC 28115	15Mn	0.127	0.262	0.779	0.255	0.0315	0.0105	0.010	0.0145					100	
NCS HC 28116	15Mn	0.157	0.351	0.854	0.018	0.024	0.019	0.0081	0.016					100	
NCS HC 28117	20Mn	0.190	0.273	0.810	0.034	0.0300	0.014	0.010	0.018					100	
NCS HC 28118	70Mn	0.722	0.564	1.10	0.041	0.0255	0.202	0.096	0.109					100	
NCS HC 28119	Carbon Steel	0.620	0.408	0.749	0.031	0.0255	0.333	0.227	0.127					100	
NCS HC 28121	45Mn	0.422	0.298	1.631	0.015	0.017	0.0115	0.021	0.014					100	
NCS HC 28123	Carbon Steel	0.152	0.175	0.491	0.019	0.019	0.027	0.030	0.108					150	
NCS HC 28125	Carbon Steel	0.327	0.304	0.515	0.0079	0.026								150	
NCS HC 28127	Carbon Steel	0.170	0.475	1.00	0.027	0.018	0.018	0.019	0.029					150	
NCS HC 28128	Ship Construction Steel	0.157	0.351	0.854	0.018	0.024	0.019	0.0081	0.016					100	
NCS HC 28129	Ship Construction Steel	0.190	0.273	0.810	0.034	0.030	0.014	0.010	0.018					100	
		As	Sb	Pb	Bi										
NCS HC 28104	Carbon Steel	0.010	0.012	0.00062	<0.00001										
NCS HC 28106	Carbon Steel	0.0094	0.0010	0.00062	<0.00001										
NCS HC 28107	Carbon Steel	0.0030	0.00061	0.000027	<0.00001										
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)	
						S	Cr	Ni	Cu						
NCS HC 31103	Carbon Steel	0.274	0.300	0.580	0.014	0.0064	0.08	0.056	0.082					100	
NCS HC 31109	Carbon Steel	0.683	0.432	0.971	0.0452	0.0163	0.288	0.450	0.098					100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)	
						S	Cr	Ni	Cu						
NCS HC 37101	Carbon Steel	0.518	0.344	0.616	0.025	0.0063	0.050	0.040						100	
NCS HC 37102	Carbon Steel	0.139	0.152	0.601	0.024	0.030	0.042	0.042	0.151					100	
NCS HC 37103	Carbon Steel	0.170	0.224	0.407	0.036	0.049	0.052	0.044	0.127					100	
NCS HC 37104	Carbon Steel	0.349	0.343	0.603	0.015	0.022	0.016	0.029	0.050					100	
NCS HC 37105	Carbon Steel	0.659	0.275	0.742	0.012	0.0074	0.017	0.056	0.113					100	
NCS HC 37106	Carbon Steel	0.168	0.270	0.510	0.013	0.027								100	
NCS HC 37107	Carbon Steel	0.236	0.274	0.595	0.019	0.022								100	
NCS HC 37108	Carbon Steel	0.168	0.270	0.510	0.013	0.027	0.222	0.052	0.118					100	
NCS HC 37109	Carbon Steel	0.308	0.232	0.517										100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)	
						S	Cu	Alt	Als	N(ppm)					
NCS HC18113	Low Carbon low sulfur Steel	0.01	1.35	0.269	0.024	0.0046	0.017	0.283	0.28	27.9*				100	
NCS HC18114	Low Carbon low sulfur Steel	0.0037	0.99	0.256	0.086	0.0054	0.015	0.248	0.244	27.2*				100	
NCS HC18115	Low Carbon low sulfur Steel	0.002	0.88	0.297	0.085	0.0055	0.015	0.259	0.258	16.3*				100	
NCS HC18116	Low Carbon low sulfur Steel	0.0124	0.008	0.202	0.013	0.0091	0.017	0.024	0.022					100	
NCS HC18117	Low Carbon low sulfur Steel	0.0054	0.009	0.116	0.014	0.0095	0.023	0.043	0.04					100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)	
						S	Ni	Cr	Cu	Mo	Alt	Sn	As		
NCS HC 18107	Carbon steel 10#	0.089	0.145	0.27	0.013	0.013	0.105	0.065	0.104	0.105				100	
NCS HC18109a	35# Carbon Steel	0.357	0.296	0.639	0.02	0.013	0.028	0.085	0.035	0.012	0.051	0.003	0.009	100	
NCS HC 18111	Carbon steel 55#	0.595	0.5	0.63	0.019	0.042	0.051	0.16	0.074	0.155				100	
		N													
NCS HC18109a	35# Carbon Steel	0.0063													

Section 1 Iron, Steel & Alloy(Chip)

2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	
NCSHC41102	Carbon Steel	0.652	0.160	0.416	0.038	0.050	0.054	0.028	0.140	0.040	0.003		0.007		150
NCSHC41109	Carbon Steel	0.064	0.601	0.246	0.0082	0.044	0.012	0.035	0.072	0.173	0.0012		0.0061	0.009	150
NCSHC41111b	Carbon Steel	0.233	0.254	0.404	0.011	0.016	0.121	0.031	0.132						100
NCSHC41113	Carbon Steel	0.166	0.198	0.533	0.032	0.024	0.005	0.009	0.007		0.0007	0.0042	0.0047		150
NCSHC41116c	Carbon Steel	0.364	0.250	0.572	0.010	0.0089	0.038	0.048	0.110						100
NCSHC41117	Carbon Steel	0.433	0.226	0.631	0.016	0.0135	0.027	0.021	0.108	0.044	0.001				150
NCSHC41119	Carbon Steel	0.528	0.287	0.665	0.020	0.010	0.029	0.023	0.081		0.002				100
NCSHC41120	Carbon Steel	0.202	0.293	0.452	0.012	0.0125	0.056	0.031	0.074		0.002				150
NCSHC41121	Carbon Steel	0.092	0.125	0.315	0.015	0.041									150
NCSHC41122	Carbon Steel	0.158	0.221	0.459	0.011	0.012									150
NCSHC41123	Carbon Steel	0.083	0.107	0.275	0.0097	0.038	0.056	0.032	0.089		(0.001)				150
NCSHC41124	Carbon Steel	0.178	0.311	0.420	0.018	0.0135	0.047	0.029	0.074		(0.003)				150
NCSHC41125	Carbon Steel	0.811	0.582	1.11	0.066	0.011	0.060	0.260	0.292		(0.005)				150
NCSHC41126	Carbon Steel	0.420	0.249	0.610	0.048	0.074	0.186	0.186	0.205		(0.003)				150
NCSHC41128	Carbon Steel	0.642	0.287	0.673	0.029	0.0042					(0.003)				150
NCSHC41129	Carbon Steel	0.587	0.265	0.641	0.018	0.011	0.022	0.021	0.087		0.001				150
NCSHC41130	Carbon Steel	0.706	0.297	0.508	0.0195	0.010	0.063	0.053	0.078		0.001				150
NCSHC41132	20Mn Si	0.207	0.536	1.45	0.029	0.012	0.034	0.035	0.082						150
NCSHC41133	35Si Mn	0.335	0.612	1.33	0.020	0.0085	0.032	0.030	0.068		0.0020				150
NCSHC41134	Carbon Steel	0.112	0.367	0.644	0.033	0.017	0.426	0.033	0.030						100
NCSHC41135	Carbon Steel	0.437	0.612	0.533	0.031	0.033	0.189	0.229	0.185						100
		Sn	As	Sb	Pb	Ns	Ali	Nt							
NCSHC41102	Carbon Steel		0.015	(<0.001)			0.007								
NCSHC41109	Carbon Steel	0.0074	0.010				0.002								
NCSHC41117	Carbon Steel						0.005								

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCSHC 11201	MoB	0.24	0.63	0.17	0.010	0.005	0.073	0.034	0.052	0.65					150
NCSHC 11202	5CrNiMo	0.58	0.34	0.80	0.031	0.004	0.54	1.71						0.29	150
NCSHC 11203	4Cr ₃ SiMnWV	0.45	1.07	1.54	0.036	0.004	2.78	0.10	0.20		0.29		0.95		150
NCSHC 11204	Cr ₂ SiMoTi	0.14	1.33	0.48	0.021	0.006	2.17	0.24	0.18			0.19		0.52	150
NCSHC 11205	38CrWVAI	0.32	0.41	0.26	0.031	0.011	1.64	0.13	0.061	0.17	0.20				150
NCSHC 11206	38CrMoAl	0.42	0.48	0.68	0.069	0.005	1.67	0.28	0.055	0.77				0.26	150
NCSHC 11207	30CrSiMoV	0.34	0.90	0.70	0.016	0.004	1.16	0.34	0.21		0.36			0.45	150
NCSHC 11208	20Cr ₃ MoWV	0.17	0.14	0.36	0.013	0.008	2.59	0.18	0.17		0.79		0.38	0.64	150
NCSHC 11209	W ₃ CrV	1.60	0.41	0.59	0.044		0.38				0.26		2.70		100
NCSHC 11209a	W ₃ MoV	1.56	0.41	0.76	0.029	0.006	0.47				0.36		3.14		150
NCSHC 11210	3CrAl	0.43	0.75	0.24	0.013		1.35	0.020	0.020	0.62					150
NCSHC 11211	9V	1.05	0.33	0.41	0.011	0.009	0.63	0.021	0.022		0.23				150
NCSHC 11212	30CrMoWV	0.30	0.22	0.55	0.017	0.006	2.65		0.12		0.75		0.65	0.56	150
NCSHC 11213	35CrMnSiNi ₂ Mo	0.35	0.96	1.15	0.018	0.004	0.84	1.96	0.059		0.058			0.33	150
NCSHC 11214	GCr15	0.997	0.281	0.287	0.013	0.007	1.53	0.019	0.028						150
NCSHC 11222	40SiMn ₂	0.38	0.89	1.65	0.011	0.005	0.11		0.045						150
NCSHC 11222a	40SiMn ₂	0.39	0.98	1.69	0.041	0.012	0.17	0.35	0.055						150
NCSHC 11223	20MnTiB	0.18	0.24	1.42	0.026	0.007	0.020		0.026			0.054			150
NCSHC 11224	45B	0.43	0.36	1.15	0.020	0.010	0.062	0.20	0.046	0.075					150
NCSHC 11225	18CrMnTi	0.16	0.33	1.01	0.020	0.007	1.08	0.14				0.049			150
NCSHC 11226	40Cr	0.40	0.26	0.79	0.014	0.017	1.01	0.076	0.036						150
NCSHC 11227	60Si ₂ Mn	0.60	2.05	0.84	0.051	0.008	0.016	0.039	0.046						150
NCSHC 11228	15MnVN	0.18	0.23	1.38	0.015	0.011		0.30	0.18		0.091				150
NCSHC 11229	40Si ₂ V	0.44	1.66	0.74	0.018	0.006		0.20	0.13		0.14				150
NCSHC 11230	08MnPR _E	0.092	0.36	1.07	0.058	0.011									150
NCSHC 11231	14MnVTiR _E	0.22	0.36	1.60	0.067	0.009					0.067	0.10			150
NCSHC 11232	20CrMo	0.212	0.270	0.460	0.0174	0.0117	0.972		0.031					0.191	100
NCSHC 11233	60Si ₂ Mn	0.661	1.82	0.805	0.027	0.017	0.021	0.020	0.136						150
NCSHC 11234	GCr15Si Mn	0.993	0.582	0.996	0.017	0.0060	1.47	0.053	0.152					0.029	100
NCSHC 11236	Low alloy	0.211	0.174	1.36	0.046	0.021	0.124	0.487	0.233	0.866	0.619	0.812	1.60	0.472	150
NCSHC 11240	Alloy steel	0.747	0.46	0.801	0.014	0.012	0.212	0.036	0.05		0.1		0.121	0.088	
		Co	B	Sn	As	Ca	N	Bi	Als	Alt					
NCSHC 11201	MoB	0.008	1.21												
NCSHC 11223	20MnTiB		0.0022												
NCSHC 11224	45B		0.0052												
NCSHC 11228	15MnVN						0.009								
NCSHC 11230	08MnPR _E							0.028							
NCSHC 11231	14MnVTiR _E							0.069							
NCSHC 11233	60Si ₂ Mn	0.011			0.016										
NCSHC 11240	Alloy steel	0.026		0.0046	0.0066	(0.0004)			0.012	0.016					
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B	
NCSHC 13201	90Mn ₂	0.91	0.056	2.09	0.054	0.030	0.105	0.076	0.20	0.015					150
NCSHC 13204	09MnCr	0.097	0.29	0.87	0.011	0.096	0.76	0.29	0.034	0.073					150
NCSHC 13207	30Ml ₂ MoVTiAlB	0.294	0.070	1.48	0.036	0.009	0.037	0.019	0.035	0.029	0.025	0.023	0.038	0.011	150
NCSHC 13208	9Si ₂ MoVTiAlB	1.085	1.42	0.308	0.013	0.004	0.045	0.021	0.036	0.115	0.50	0.30	0.89	0.016	150

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	C	Si	Mn	P	Chemical Composition(Percent)										Unit Size (in g)
NCS HC 13210	8SiMnMoVTiAlB	0.78	0.88	0.675	0.013	0.122	0.019	0.021	0.036	0.10	0.33	0.39	0.65	0.0058		100
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B		Unit Size (in g)
NCS HC 13212	09SiMoVTiAlB	0.045	0.46	0.396	0.054	0.069	(0.0095)	0.016	0.030	0.028	0.051	0.041	0.11	0.028		100
NCS HC 13214	Low Alloy Steel	0.395	0.792	1.84	0.146	0.018										100
NCS HC 13215	Low Alloy Steel	0.361	1.69	0.989	0.096	0.019										100
NCS HC 13216	Low Alloy Steel	0.214	0.389	1.37	0.056	0.020										100
NCS HC 13217	Low Alloy Steel	0.284	1.11	0.749	0.037	0.018										100
NCS HC 13219	Low Alloy Steel	0.520	1.03	1.04	0.0654	0.0247										100
NCS HC 13221	Low Alloy Steel	0.065	0.38	0.96	0.174		0.016					0.061	0.10			150
		Nb	R _E	Alt	Als											
NCS HC 13221	Low Alloy Steel	0.165	0.014	0.085	0.081											
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co		Unit Size (in g)
NCS HC 14201	Low Alloy Steel	0.39	0.293	0.558	0.019	0.0105	0.84	0.035	0.215	0.047	0.007		0.193	0.023		150
NCS HC 14201a	Low Alloy Steel	0.358	0.272	0.573	0.014	0.0086	1.03	0.020	0.150				0.137			100
NCS HC 14202	Low Alloy Steel	0.118	0.405	0.433	0.017	0.012			0.421	0.389		0.519				100
NCS HC 14203	Low Alloy Steel	0.082	0.177	0.222	0.012	0.024			0.274	0.190		0.249				100
NCS HC 14204	Low Alloy Steel	0.080	0.583	0.636	0.024	0.012			0.363	0.317		0.149				100
NCS HC 14205	Low Alloy Steel	0.076	0.037	0.303	0.033	0.061			0.220	0.334		0.144				100
NCS HC 14206	Low Alloy Steel	0.089	0.389	0.540	0.013	0.022			0.314	0.465		0.089				100
NCS HC 14207	Low Alloy Steel	0.135	0.435	1.25	0.041	0.020			0.165		0.090					150
NCS HC 14208	Low Alloy Steel	0.39	1.82	0.97	0.014	0.009			0.43		0.153					150
NCS HC 14209	Low Alloy Steel	0.562	1.72	0.714	0.020	0.0054	0.173	0.201								150
NCS HC 14210	40Cr	0.445	0.308	0.659	0.027	0.0068	1.00	0.017	0.049							150
NCS HC 14211	Low Alloy Steel	0.192	0.276	1.72	0.0071	0.0022	0.283	0.194	0.311		0.093					100
NCS HC 14213	Silicon Steel	0.076	3.18	0.081	0.0090	0.023			0.066							100
NCS HC 14214	Silicon Steel	0.044	3.15	0.060	0.0081	0.025			0.162							100
NCS HC 14215	Silicon Steel	0.0032	0.477	0.256	0.080	0.0076			0.033							100
NCS HC11241	Alloy Steel	0.185	0.377	1.32	0.016	0.0057	0.038	0.024	0.042		0.12	0.017	0.011	0.018		100
NCS HC11242	Alloy Structure Steel	0.081	0.271	0.537	0.014	0.0073	4.37	0.037	0.046		0.032	0.037	0.446	0.011		100
NCS HC11243	Alloy Structure Steel	0.398	0.725	1.44	0.017	0.024	0.081	0.025	0.045		0.127	0.047	0.03	0.015		100
		Als	N	Ca	Alt	As	Sn	Bs	Bt							
NCS HC 14201a	Low Alloy Steel	0.061														
NCS HC 14213	Silicon Steel	0.031	0.0081													
NCS HC 14214	Silicon Steel	0.0014	0.0040													
NCS HC 14215	Silicon Steel	0.022	0.0020													
NCS HC11241	Alloy Steel	0.038		0.001	0.04	0.009	0.0045	0.0022	0.0025							
NCS HC11242	Alloy Structure Steel	0.022		(0.0004)	0.026	0.0067	0.0023									
NCS HC11243	Alloy Structure Steel	0.0023		(0.0003)	(0.004)	0.0086	0.0047									
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Als	Alt	Co		Unit Size (in g)
NCS HC11241	Alloy Steel	0.185	0.377	1.32	0.016	0.0057	0.038	0.024	0.042	0.011	0.12	0.038	0.04	0.018		100
NCS HC11242	Alloy Structure Steel	0.081	0.271	0.537	0.014	0.0073	4.37	0.037	0.046	0.446	0.032	0.022	0.026	0.011		100
NCS HC11243	Alloy Structure Steel	0.398	0.725	1.44	0.017	0.024	0.081	0.025	0.045	0.03	0.127	0.0023	(0.004)	0.015		100
		W	As	Sn	Ca	Bs	Bt									
NCS HC11241	Alloy Steel	0.017	0.009	0.0045	0.001	0.0022	0.0025									
NCS HC11242	Alloy Structure Steel	0.037	0.0067	0.0023	(0.0004)											
NCS HC11243	Alloy Structure Steel	0.047	0.0086	0.0047	(0.0003)											

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 15216	ML15MnVB	0.166	0.162	1.33	0.014	0.022	0.027	0.040	0.017	0.029	0.110	0.003		100
NCS HC 15217	Bearing Steel	1.005	0.584	0.905	0.009	0.005	0.032	0.033			0.245	0.301	0.0011	100
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 15220	Silicon Steel	0.094	0.83	0.51	0.163	0.0059					0.046			100
NCS HC 15221	Silicon Steel	0.083	1.26	0.45	0.194	0.005					0.066			100
NCS HC 15222	Silicon Steel	0.073	1.55	0.39	0.259	0.0053					0.156			100
NCS HC 15223	Silicon Steel	0.081	1.79	0.36	0.251	0.0042					0.101			100
NCS HC 15224	Silicon Steel	0.089	2.26	0.28	0.212	0.0048					0.130	0.0083		100
NCS HC 15227	Silicon Steel	0.074	2.86	0.24	0.0156	0.0045					0.021			100
NCS HC 15228	Silicon Steel	0.060	3.21	0.20	0.0146	0.0049					0.236			100
NCS HC 15229	Silicon Steel	0.063	2.96	0.192	0.0124	0.0035					0.045	0.0118		100
NCS HC 15231	Silicon Steel	0.038	3.66	0.154	0.0135	0.0027					0.158			100
NCS HC 15233	Silicon Steel	0.041	4.18	0.084	0.0110	0.0033					0.124			100
NCS HC 15234	Silicon Steel	0.0385	5.21	0.072	0.0090	0.0047					0.057			100
NCS HC 15235	Silicon Steel	0.059	4.72	0.087	0.0085	0.0053					0.055			100
NCS HC 15236	Silicon Steel	0.038	5.22	0.070	0.0092	0.0050					0.056			100
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 16201	25SiMnMoV	0.25	0.195	2.20	0.0192	0.019	0.236	0.25	0.097	0.105			0.37	150
NCS HC 16202	35SiMn ₂ MoV	0.332	1.626	1.691	0.0182	0.0127	0.24	0.242	0.388	0.174			0.381	150
NCS HC 16204	37SiMn ₂ WV	0.374	0.717	1.651	0.0233	0.056	0.24	0.257	0.192	0.085		0.925	0.447	150
NCS HC 16205	30MnMoTiB	0.30	0.443	1.442	0.0207	0.015	0.305	0.316			0.0625		0.0014	150
NCS HC 16206	40MnWB	0.411	0.277	1.154	0.0213	0.013	0.137	0.171				0.611	0.0044	150
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 16207	15SiMn ₃ Mo	0.121	1.160	3.320	0.0242	0.0490	0.215	0.201	0.210				0.560	150
NCS HC 16208	30Mn ₂ MoV	0.310	0.300	1.970	0.0174	0.024	0.283	0.300	0.239			0.740	0.460	150
NCS HC 16209	12CrMoV	0.106	0.320	0.701	0.0268	0.034	0.542	0.045	0.029	0.269			0.322	150
NCS HC 16210	20SiMnV	0.192	0.636	1.52	0.0207	0.021	0.255	0.202		0.110				150
NCS HC 16211	25Cr ₂ Mo2V	0.254	0.303	0.753	0.0209	0.012	2.34	0.035	0.029	0.422			1.02	150
NCS HC 16212	30Mn ₂ MoTi	0.301	0.309	1.56	0.0182	0.013	0.188	0.175			0.052		0.361	150
NCS HC 16213	40MnVB	0.425	0.364	1.22	0.0158	0.0020	0.072	0.035	0.034	0.106			(0.0002)	150

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)														Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)	
NCS HC 17201	SiMnB	0.0332	1.50	0.230	0.0128	0.022	0.473	0.078	0.320	0.066	0.050	0.247				100
NCS HC 17204	SiMnB	0.392	0.626	1.08	0.0285	0.019	0.174	0.241	0.030		0.023	0.116				100
NCS HC 17208	Low Alloy Steel	0.082	0.694	0.952	0.0155	0.057	0.371	1.80	0.034						0.569	100
NCS HC 17211	Low Alloy Steel	0.510	0.148	0.151	0.0283	0.007	1.70	0.522	0.27						0.445	100
NCS HC 17212	Low Alloy Steel	0.290	0.579	0.770	0.0143	0.012	1.28	0.858	1.06						0.298	100
NCS HC 17213	Low Alloy Steel	0.75	0.232	1.428	0.0128	0.0068	0.88	0.984			0.238	0.432				100
NCS HC 17214	Low Alloy Steel	0.619	0.303	0.884	0.0134	0.0148	0.935	1.492			0.430	0.643				100
NCS HC 17215	Low Alloy Steel	0.553	0.420	0.646	0.0137	0.0059	0.978	2.482			0.699	0.927				100
NCS HC 17216	Low Alloy Steel	0.156	0.557	0.481	0.0238	0.0092	1.652	3.47			0.114	1.455				100
NCS HC 17218	Low Alloy Steel	0.296	0.213	1.193	0.0117	0.002	0.702	0.431	0.42						1.05	100
NCS HC 17219	Low Alloy Steel	0.672	0.216	0.382	0.0172	0.0261	0.074	0.053	0.063						0.081	100
NCS HC 17224	18CrMnTi	0.184	0.351	0.981	0.0074	0.035	1.14	0.085	0.190							150
NCS HC 17225	45CrNi	0.476	0.273	0.675	0.0204	0.016	0.62	1.24	0.203							150
NCS HC 17226	5CrMnMo	0.558	0.507	1.47	0.0235	0.032	0.74	0.246	0.161						0.245	150
NCS HC 17227	12CrMoV	0.103	0.256	0.502	0.0204	0.024	0.51	0.176	0.184		0.25				0.298	150
NCS HC 17229	37SiMn ₂ WV	0.399	0.684	1.79	0.0251	0.0258	0.283	0.27	0.182						0.476	150
NCS HC 17232	5CrWSi	0.503	0.592	0.376	0.0212	0.015	1.14	0.140	0.028							150
NCS HC 17234	Low Alloy Steel	0.15	1.065	0.91	0.0044	0.045	1.035	0.906	0.277	0.035		0.40				150
		Nb	Zr	B	RE	Al _t	Bt									
NCS HC 17201	SiMnB			0.0016		0.069	0.0067									
NCS HC 17204	SiMnB			0.0037		0.086	0.0042									
NCS HC 17214	Low Alloy Steel	0.262	0.049		0.0222											
NCS HC 17215	Low Alloy Steel	0.469	0.088		0.037											
NCS HC 17216	Low Alloy Steel	0.735	0.132		0.0376											
NCS HC 17224	Low Alloy Steel			0.0069												

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Nb				
NCSHC18208	42CrMo	0.413	0.260	0.542	0.025	0.025	0.933	0.319	0.199		0.233	150			
NCSHC18209	ZG35CrMo	0.321	0.406	0.514	0.035	0.0029	0.933	0.376	0.180		0.324	150			
NCSHC18210	40Cr	0.41	0.26	0.54	0.025	0.025	0.93	0.32	0.20			100			
NCSHC18211	60Si ₂ Mn	0.592	1.84	0.735	0.016	0.022			0.037			100			
NCSHC18212	20CrMnTi	0.219	0.417	1.02	0.016	0.015	1.14			0.060		100			
NCSHC18213	20CrMo	0.220	0.217	0.473	0.016	0.020	1.00				0.231	100			
NCSHC18214	Low Alloy Steel	0.355	0.273	0.57	0.01	0.033	0.93	0.057	0.075	0.154		100			
NCSHC18215	Low Alloy Steel	0.152	0.305	1.26	0.012	0.023	0.121	0.034	0.077			100			
		As	Pb	Al _t	Al _s										
NCSHC18214	Low Alloy Steel	0.011	0.57	0.035	0.029										
NCSHC18215	Low Alloy Steel	0.018													
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Co	B		
NCSHC19201	20Cr	0.175	0.285	0.610	0.0203	0.020	0.81							100	
NCSHC19202	40Cr	0.435	0.274	0.698	0.0139	0.010	0.97							100	
NCSHC19204	Axle Steel	0.444	0.280	0.680	0.010	0.030	0.013	0.025	0.037	0.011		0.036		100	
NCSHC19205	09V	0.093	0.486	0.87	0.010	0.036	0.016	0.039	0.110	0.085				100	
NCSHC19206	38CrMoAl	0.402	0.364	0.430	0.0154	0.009	1.51				0.198			100	
NCSHC19207	27MnMoVB	0.306	0.232	1.33	0.0195	0.014				0.125	0.388		(0.0014)	100	
NCSHC19208	18CrMnTi	0.192	0.299	0.975	0.0104	0.010	1.22							100	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCSHC20201	20Cr	0.209	0.298	0.609	0.015	0.014	0.808	0.093	0.089		0.0032			0.0088	100
NCSHC20202	40Cr	0.409	0.376	0.742	0.015	0.011	1.053	0.063	0.086		0.0023			0.0088	100
NCSHC20203	20Cr	0.21	0.30	0.61	0.015	0.014	0.81	0.094	0.090						100
NCSHC20204	20Mn ₂	0.201	0.313	1.63	0.022	0.018	0.300	0.265	0.169	0.021	0.0025	0.0033	0.0081	0.043	100
NCSHC20210	Silicon Steel	0.057	3.36	0.225	0.0072	0.019	0.259	0.316	0.314					0.0036	100
NCSHC20214	15MnCrNiCu	0.123	0.314	0.674	0.022	0.024	0.782	0.387	0.254	0.011	0.0032	0.0026	0.0052	0.027	100
NCSHC20215	40CrNiMoA	0.385	0.271	0.667	0.013	0.020	0.781	1.54	0.150	0.011	0.0062	0.0038	0.0066	0.215	100
		Co													
NCSHC20204	20Mn ₂	0.019													
NCSHC20214	15MnCrNiCu	0.011													
NCSHC20215	40CrNiMoA	0.011													

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCSHC21201	GCr15	1.090	0.431	0.433	0.0112	(0.0005)	1.442	0.134	0.158	0.0363		0.0074		0.060	100
NCSHC21201b	Bearing Steel	0.990	0.239	0.315	0.0065	0.0054	1.47	0.042	0.086					0.032	100
NCSHC21202	GCr ₁₅ SiMn	1.006	0.550	1.063		0.0065	1.506	0.046	0.126	0.042		0.0072		0.011	100
NCSHC21203	GCr15	1.01	0.305	0.37	0.012	(0.0004)	1.55	0.046	0.081						100
NCSHC21204	GCr15	1.019	0.151	0.338	0.020	(0.019)	1.539		0.086						100
NCSHC21205	GCr15	0.953	0.193	0.282	0.0276	0.012	1.634		0.233						100
NCSHC21206	GCr ₁₅ SiMn	0.98	0.404	0.99	0.023	0.005	1.38								100
NCSHC21207	60Si ₂ Mn	0.501	2.15	0.600	0.0149	0.0174	0.362	0.276	0.195	0.065	0.043		0.77	0.160	100
NCSHC21208	60Si ₂ Mn	0.400	2.91	0.437	0.0064	0.0029	0.159	0.064	0.064	0.113			1.18	0.012	100
NCSHC21209	60Si ₂ Mn	0.599	1.69	1.14	0.0209	0.0291	1.13	0.124	0.095	0.018	0.084		0.025	0.091	100
NCSHC21210	60Si ₂ Mn	0.706	1.10	0.857	0.0256	0.0374	0.760	0.393	0.303	0.158	0.168		0.176	0.273	100
NCSHC21211	60Si ₂ Mn	0.666	1.74	0.752	0.0144	0.0190	0.071	0.018	0.147	0.132	0.129		0.40	0.051	100
NCSHC21212	H08Mo ₂ SiA	0.087	0.827	1.90	0.0107	0.0156	0.035	0.061	0.091						100
NCSHC21215	35MoVAITiR _E	0.37	0.42	1.15	0.013	<0.001	0.030	0.061	0.13	0.52				1.05	100
NCSHC21218	CrMnV+Mo	0.09	0.775	9.88	0.0464	0.012	18.80	4.97	0.0396		0.024			3.10	100
NCSHC21220	CrMnV	0.09	0.82	13.56	0.100	0.026	15.89	7.114	0.080		0.027				100
NCSHC21221	20MnSi	0.218		1.28	0.020	0.025	0.239	0.094	0.136		0.094	0.028		0.061	100
		B	Sn	As	Sb	N									
NCSHC21201	GCr15		0.0273	0.023	0.025										
NCSHC21201b	Bearin Steel		0.020	0.0092											
NCSHC21202	GCr ₁₅ SiMn	0.0031	0.0107	0.0110	0.022										
NCSHC21204	GCr15		0.049												
NCSHC21205	GCr15		0.038	0.0334											
NCSHC21206	GCr ₁₅ SiMn			0.022											
NCSHC21210	60Si ₂ Mn	0.0012													
NCSHC21211	60Si ₂ Mn	0.0013													
NCSHC21218	CrMnV+Mo					0.097									
NCSHC21220	CrMnN					0.29									

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Alt	Sn	Unit Size (in g)
NCSHC21222	65Mn	0.649	1.02	0.012	0.0062	0.279	0.040	0.048	0.147	0.0069	0.0019	0.0051	0.0061	0.014	100
Number	Name	C	S	P	Si	Mn	Cr	Ni	Cu	Nb	Re	Al(s)	N	Unit Size (in g)	
NCSHC22201	Alloy structure steel	0.073	0.0053	0.0253	0.438	0.675	0.090	0.096	0.089	0.044	0.048	0.093	0.013	100	
NCSHC22203	Alloy structure steel	0.124	0.0045	0.0125	0.674	0.821	0.127	0.055	0.094	0.122	0.098	0.177		100	
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Zr	Unit Size (in g)
NCSHC23208	45CrV	0.41	0.364	0.67	0.0184	0.0165	0.96	0.139	0.095						150
NCSHC23209	38CrMoAl	0.360	0.310	0.490	0.0310	0.0140	1.540	0.410	0.185	1.13				0.270	150
NCSHC23210	38CrMoAl	0.39	0.335	0.425	0.0246	0.011	1.44	0.238	0.275	0.93				0.17	150
NCSHC23211	PCrNi ₄ Mo	0.367	0.375	0.56	0.018	0.027	0.957	3.95						0.43	150
NCSHC23214	30CrMnMoTi	0.328	0.326	0.770	0.0205	0.021	1.160	0.058	0.060					0.270	150
NCSHC23215	6 ⁵ Si ₂ M ⁿ W	0.691	1.836	0.813	0.019	0.0223	0.227	0.273	0.038			1.03			150
NCSHC23217	45CrNiMoY	0.43	0.337	0.635	0.027	0.016	0.994	1.64	0.206		0.15			0.28	150
NCSHC23218	35MnWMoVB	0.33	0.40	1.02	0.032	0.024	0.18	0.26	0.17		0.25	0.50	0.137	0.0034	150
NCSHC23220	12CrNiA	0.144	0.24	0.49	0.0247	0.011	0.82	2.41	0.11						150
NCSHC23221	38CrA	0.375	0.345	0.69	0.026	0.0315	1.00	0.26	0.16	0.17					150
NCSHC23222	45CrNiWV	0.467	0.47	0.687	0.022	0.0248	1.03	1.515			0.146	0.693			150
NCSHC23223	30CrMnSiNi ₂	0.30	1.07	0.885	0.0197	0.0186	1.03	1.56	0.161	0.080		0.195	0.126		100
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	Als	Alt	Sn	Unit Size (in g)
NCSHC24202	70Si ₂ CrA	0.673	1.58	0.504	0.018	0.012	0.29	0.040	0.073						100
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	Als	Alt	Sn	Unit Size (in g)
NCSHC28201	20Cr	0.197	0.252	0.738	0.0195	0.015	0.785	0.026	0.029						150
NCSHC28202	40Cr	0.44	0.335	0.665	0.014	0.0055	0.998	0.053	0.741						150
NCSHC28204	35CrMo	0.390	0.304	0.558	0.029	0.0054	0.948	0.070	0.096	0.137					100
NCSHC28205	45Mn ₂	0.422	0.298	1.63	0.015	0.017	0.012	0.021	0.014						100

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	Sn	Als	
NCS HC 28206	Bearing Steel	0.993	0.205	0.284	0.011	0.0073	1.53	0.056	0.168	0.0026	0.0015	0.011	0.010	0.012	100
NCS HC 28207	Bearing Steel	1.08	0.232	0.284	0.019	0.0097	1.36	0.051	0.180	0.0030	0.0003	0.0007	0.0093	0.0029	100
NCS HC 28208	Alloy structure Steel	0.203	0.221	0.502	0.020	0.018	0.907	0.050	0.181	0.0010	0.0024	0.194		0.012	100
NCS HC 28209	Alloy structure Steel	0.202	0.225	1.02	0.017	0.011	1.21	0.047	0.141	0.0014	0.0053	0.236		0.020	100
NCS HC 28210	Alloy structure Steel	0.224	0.288	0.764	0.026	0.0083	6.21	0.452	0.175	0.0020	0.0018	0.254		0.0051	100
NCS HC 28211	Alloy structure Steel	0.265	0.312	0.934	0.013	0.014	1.13	0.082	0.148	0.070		0.011		0.018	100
NCS HC 28212	Alloy structure Steel	0.506	0.304	0.664	0.014	0.022	1.04	0.109	0.208	0.0021		0.016		0.002	100
NCS HC 28213	Anchor Chain Steel	0.202	0.271	1.19	0.015	0.014	0.082	0.128	0.223	0.024	0.0016	0.017		0.040	100
NCS HC 28214	Anchor Chain Steel	0.312	0.292	1.35	0.023	0.017	0.069	0.117	0.243	0.023	0.0022	0.010		0.040	100
NCS HC 28215	Structural Steel	0.104	0.308	0.476	0.093	0.024	0.016	0.011	0.295	(0.004)				0.0015	100
NCS HC 28216	Carbon Steel	0.162	0.21	0.373	0.019	0.015	0.129	0.137	0.091	0.0005	0.0047	0.024	0.0046	0.0018	100
NCS HC 28217	Alloy Steel	0.345	0.318	0.424	0.022	0.011	1.58	0.099	0.116	0.0036	0.0053	0.171	0.0047	0.807	100
NCS HC 28218	Alloy Steel	0.21	0.385	1.295	0.013	0.0208	0.169	0.099	0.101	0.0009	0.161	0.015	0.0054	0.054	100
NCS HC 28219	Alloy Steel	0.118	0.237	0.257	0.023	0.023	0.147	0.154	0.354	0.109	0.013	0.02	0.0048	0.101	100
NCS HC 28220	Alloy Steel	0.397	1	0.701	0.013	0.012	1.91	1.29	0.091	0.081	1.2	0.446	0.0057	0.01	100
NCS HC 28223	Line Steel	0.055	0.29	1.81	0.011	0.0024	0.283	0.201	0.205	0.022		0.116		0.026	100
NCS HC 28224	Line Steel	0.058	0.202	1.41	0.0072	0.0063	0.049	0.012	0.013	0.016		0.0014		0.026	100
NCS HC 28225	Line Steel	0.083	0.194	0.559	0.01	0.007	0.024	0.009	0.02	0.003		0.002		0.021	100
NCS HC 28226	Line Steel	0.086	0.246	1.2	0.011	0.006	0.022	0.008	0.015	0.01		0.0012		0.015	100
NCS HC 28227	Line Steel	0.105	0.325	1.31	0.0087	0.0041	0.023	0.0089	0.016	0.02		0.0013		0.022	100
NCS HC 28228	Line Steel	0.108	0.279	1.23	0.013	0.006	0.026	0.0061	0.01	0.01		0.001		0.022	100
		Al	Co	As	V	Nb	Re	Sb	Alt	B	Zn	Ca	N		
NCS HC 28206	Bearing Steel	0.0013	0.013	0.0099											
NCS HC 28207	Bearin Steel	0.0021	0.013	0.0097											
NCS HC 28208	Alloy Stucture Steel	0.0022	0.013		0.0025										
NCS HC 28209	Alloy Stucture Steel	0.0020	0.013		0.0035										
NCS HC 28210	Alloy Stucture Steel	0.0036	0.013		0.0033										
NCS HC 28211	Alloy Stucture Steel	0.0019	0.012		0.0038										
NCS HC 28212	Alloy Stucture Steel	0.0029	0.014		0.154										
NCS HC 28213	Anchor Chain Steel	0.0019	0.011		0.0013										
NCS HC 28214	Anchor Chain Steel	0.0021	0.013		0.0013										
NCS HC 28215	Structural Steel		0.0057		0.0034	<0.001	0.0022								
NCS HC 28216	Carbon Steel		0.0071	0.0068	0.0011			0.0019	0.0029	0.0002	0.0004				
NCS HC 28217	Carbon Steel		0.0092	0.0061	0.0034			0.002	0.824	0.0003	0.02				
NCS HC 28218	Carbon Steel		0.0064	0.0056	0.011			0.0019	0.061	0.0003	0.0006				
NCS HC 28219	Carbon Steel		0.0093	0.0067	0.0023			0.0023	0.106	0.0003	0.0023				
NCS HC 28220	Carbon Steel		0.021	0.0064	0.377			0.002	0.012	0.0013	0.0014				
NCS HC 28223	Line Steel			0.004	0.0043	0.103			0.027			0.0009	0.0053		
NCS HC 28224	Line Steel			0.0032	0.042	0.05			0.028			0.0012	0.004		
NCS HC 28225	Line Steel			0.0034	0.0009	0.011			0.023			0.0017	0.0053		
NCS HC 28226	Line Steel			0.0043	0.0014	0.022			0.016			0.0035	0.0059		
NCS HC 28227	Line Steel			0.0033	0.038	0.035			0.023			0.002	0.0067		
NCS HC 28228	Line Steel			0.0044	0.0012	0.023			0.023			0.0013	0.0074		
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	W	Mo	Sn	
NCS HC 29215	Bearing Steel	0.992	0.396	0.291	0.031	0.030	0.362	0.067	0.019	0.009	0.0086	0.090	0.010	0.018	150
NCS HC 29216	Bearing Steel	0.909	0.168	1.01	0.0202	0.0051	1.00	0.066	0.046	0.188	0.011	0.013	0.013	0.0057	150
		As	Sb	Pb											
NCS HC 29215	Bearing Steel	0.0078	0.0013	0.0005											
NCS HC 29216	Bearing Steel	0.013	0.0020	0.0011											

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
		C	Si	Mn	P	S	Cr	Ni	Cu	W						
NCSHC30201	40Cr	0.42	0.325	0.614	0.0206	0.0123	0.96		0.222						150	
NCSHC30202	60Si ₂ Ni ₂	0.613	1.71	0.628	0.0213	0.009	0.239	1.54	0.218						150	
NCSHC30204	60Si ₂ MnW	0.638	1.502	0.834	0.0124	0.0258	0.132	0.0525	0.16	0.928					150	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)		
						S	Cr	Ni	Cu							
NCSHC31202	30CrMoSiA	0.313	1.245	0.952	0.0147	0.010	1.05								100	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)										Unit Size (in g)
						S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCSHC41202	GCr ₁₅	0.982	0.301	0.282	0.014	0.0061	1.52	0.42	0.064	Al0.040	0.002	0.0073	0.0049	0.010	150	
NCSHC41203	GCr ₁₅ SiMn	1.01	0.529	1.11	0.0135	0.005	1.50				0.005				150	
NCSHC41204	Silicon Steel	0.054	2.33	0.183	0.017	0.0325				0.008	Al0.005				150	
NCSHC41205	Silicon Steel	0.049	3.27	0.245	0.012	0.005				0.024	Al0.006				150	
NCSHC41206	Silicon Steel	0.050	4.38	0.091	0.0095	0.002				0.028	Al0.002				150	
NCSHC41207	20Cr	0.244	0.304	0.668	0.0155	0.010	0.881				0.002				100	
NCSHC41208	40Cr	0.443	0.282	0.795	0.0265	0.0105	1.004				0.003				100	
NCSHC41209	45CrV	0.425	0.277	0.667	0.024	0.0090	0.973	0.083	0.146		0.175				150	
NCSHC41210	45CrNiMoV	0.446	0.239	0.680	0.018	0.014	1.00	1.56	0.057		0.150		0.013	0.286	150	
NCSHC41211	40CrMo	0.398	0.303	0.612	0.0225	0.012	1.11	0.139	0.162		0.006		0.016	0.229	150	
NCSHC41212	38SiMnMo	0.411	1.33	1.31	0.0205	0.010								0.254	150	
NCSHC41213	W4Cr ₂ MoVSiAl	0.473	0.970	0.167	0.018	0.0051	1.47				1.05		3.85	1.29	150	
NCSHC41214	18Cr ₂ ni ₄ W	1.45	0.311	0.402	0.100	0.0060	1.45	4.32			0.0028		0.85		150	
NCSHC41215	20MnMo	0.205	0.317	1.37	0.021	0.0079	0.137		0.129	0.028	0.002	Al0.0017	0.016	0.295	150	
NCSHC41216	25CrMoV	0.235	0.246	0.703	0.0072	0.0016	1.07		0.027	0.0011	0.294	Al0.0029	0.0074	1.03	150	
NCSHC41217	26Cr ₂ Ni ₄ MoV	0.237	0.011	0.240	0.0062	0.0062	1.62	3.87	0.038	0.0005	0.092	Al0.0003	0.002	0.367	150	
NCSHC41218	5CrW ₂ Si	0.489	0.633	0.263	0.017	0.0032	1.09	0.058	0.082		0.001		2.21	0.051	150	
NCSHC41219b	35CrMo	0.368	0.288	0.534	0.014	0.0085	0.934	0.051	0.164					0.156	100	
NCSHC41220	20CrMoA	0.188	0.272	0.538	0.0165	0.0063	0.931	0.130	0.086	0.011	0.002	Al0.0049		0.202	150	
NCSHC41221	25CrMoNiSiA	0.309	1.08	1.14	0.0145	0.0060	1.13	1.62	0.087		0.004				150	
NCSHC41222	40CrNiMoA	0.447	0.329	0.693	0.0155	0.0145	0.741	1.31	0.197	0.008	0.003	Al0.005		0.179	150	
NCSHC41223	20MnV	0.184	0.306	1.44	0.025	0.0154	0.035	0.026	0.079		0.108				150	
NCSHC41224	60Si ₂ Mn	0.603	1.76	0.710	0.019	0.011					(0.003)				150	
NCSHC41226	5CrMnMo	0.559	0.420	1.44	0.014	0.0080	0.743	0.035	0.090	0.005	0.0055	0.0033		0.237	150	
NCSHC41227	9CrSi	0.858	1.31	0.427	0.012	0.0071	0.976	0.032	0.067	0.014	0.003	0.0070		0.0077	150	
NCSHC41228	CrWMn	1.00	0.238	0.925	0.0190	0.0036	1.08	0.049	0.074		0.003		1.40		150	
NCSHC41229	35CrMoV	0.347	0.263	0.520	0.205	0.0062	1.14	0.059	0.070	Al0.009	0.145	0.0017	0.033	0.259	100	
		Co	Sn	As	Sb	Pb	N									
NCSHC41202	GCr ₁₅	0.11	0.011	0.006	0.0013											
NCSHC41215	20MnMo	0.0090	0.018	0.0090	0.0030	0.00056	0.0092									
NCSHC41216	25CrMoV	0.0053	0.0029	0.0041	0.00097	0.00006	0.0065									
NCSHC41217	26Cr ₂ Ni ₄ Mov	0.006	0.0066	0.0038	0.0019	0.00003	0.0048									
NCSHC41220	20CrMoA			0.0077												
NCSHC41222	40CrNiMoA			0.010												
NCSHC41226	5CrMnMo	0.0083	0.0081	0.010	0.0022		0.0067									
NCSHC41227	9CrSi	0.0070	0.011	0.0085	0.0020		0.0062									
NCSHC41228	CrWMn	0.010	0.010	0.010												
NCSHC41229	35CrMoV	0.012	0.0030	0.013	0.0012		0.012									
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)		
						S	Cr	Ni	Cu							
NCSHC37201	40Cr	0.414	0.220	0.638	0.026	0.026	0.969	0.038	0.135						100	
NCSHC37202	20Cr	0.233	0.356	0.683	0.023	0.017	0.907	0.084	0.124						100	
NCSHC37203	50Cr	0.527	0.312	0.599	0.018	0.027	0.833	0.046	0.126						100	

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCSHC 11302	4Cr ₃ Si ₄	0.46	4.01	0.52	0.035	0.010	3.08	0.40							100
NCSHC 11303	Cr ₂₀ Al ₅ Co ₂	0.08	0.70	0.48	0.019		20.09	0.51		5.35					100
NCSHC 11304	Cr ₂₄ AlSi	0.11	1.34	1.08	0.020		23.27	0.13		2.08					100
NCSHC 11307	Cr ₁₃ Ni ₅ Mn ₉	0.19	0.69	9.94	0.099	0.009	12.49	4.86	0.031						100
NCSHC 11307a	Cr ₁₃ Ni ₅ Mn ₉	0.17	0.47	8.14	0.043	0.021	12.07	5.02	0.031		0.022				100
NCSHC 11308	Cr ₁₃ Al ₄	0.11	1.43	0.61	0.018		13.54	0.10	0.019	4.05					100
NCSHC 11309	Cr ₁₇ Al ₄ Si	0.09	1.95	0.55	0.019		17.32	0.13	0.019	3.34					100
NCSHC 11310	Cr ₂₅ Al ₅	0.094	1.86	0.51	0.020		26.96	0.20	0.019	3.54					100
NCSHC 11311	Cr ₂₀ Ni ₁₁ Mn ₆	0.19	0.71	6.52	0.022		19.32	11.18	0.044						100
NCSHC 11312	Cr ₁₈ Ni ₁₄ Mo ₃ Ti	0.28	0.56	1.73	0.018	0.004	17.13	14.21				0.369		3.38	100
NCSHC 11313	Cr ₁₂	2.03	0.306	0.268	0.021	0.012	12.34	0.102	0.100						100
NCSHC 11315b	High Manganese Steel	1.14	0.666	12.34	0.059	0.0031	0.176	0.093	0.164		0.074			0.022	100
NCSHC 11317	Cr ₁₈ Ni ₁₁ Nb	0.10	1.06	1.61	0.024	0.042	17.31	11.25	0.22						100
NCSHC 11318	3Cr ₁₃	0.31	0.57	0.35	0.057	0.008	13.27	0.11							100
NCSHC 11319	4Cr ₉ Si ₂	0.327	2.36	0.896	0.018	0.0084	9.11	0.129	0.068						100
NCSHC 11320	Cr ₂₄ Ni ₇ SiN	0.26	1.29	1.21	0.018	0.0085	24.45							0.007	100
NCSHC 11321	Cr ₇ Al ₇	0.12	1.02	0.47	0.011		7.68			7.99					100
NCSHC 11321a	Cr ₇ Al ₇	0.15	0.66	0.73	0.037	0.037	7.09	0.52		7.06					100
NCSHC 11325	Stainless Steel	0.315	2.00	2.42	0.004	0.006	28.30	23.99	0.651	0.006	0.510	0.050	0.003	0.495	100
NCSHC 11330	Stainless Steel	0.205	1.39	1.95	0.010	0.050	11.61	20.10	3.12	0.045	0.215	0.580	0.093	3.25	100
		Co	Nb	N	Sn	As	Pb	Alt							
NCSHC 11303	Cr ₂₀ Al ₅ Co ₂	2.02													
NCSHC 11307a	Cr ₁₃ Ni ₅ Mn ₉	0.027													
NCSHC 11315b	High Manganese Steel	0.021						0.038							
NCSHC 11317	Cr ₁₈ Ni ₁₁ Nb	0.019	0.84												
NCSHC 11320	Cr ₂₄ Ni ₇ SiN			0.261											
NCSHC 11325	Stainless Steel	0.006	0.053	0.19	0.001	0.001	0.001								
NCSHC 11330	Stainless Steel	0.070	1.33	0.013	0.01	0.004	0.001								

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number	Name	C	Si	Mn	P	S	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 13302	High Manganese Steel	1.28	0.48	12.68	0.063	0.017									150
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	N	Co	Unit Size (in g)
NCS HC 15302	0Cr ₁₃	0.057	0.344	0.362	0.048	0.008	15.66	0.293	0.028	0.238	0.0065	0.085			100
NCS HC 15307	2Cr ₁₃	0.181	0.424	0.482	0.0194	0.012	12.45	0.142	0.020	0.103	0.0068				100
NCS HC 15308	1Cr ₁₈ Ni ₉ Ti	0.053	0.630	0.971	0.0214	0.006	17.35	10.13		0.15	0.69				100
NCS HC 15309	Cr ₂₃ Ni ₁₃	0.100	0.667	1.24	0.0151	0.007	22.11	14.60							100
NCS HC 15310	Stainless Steel	0.023	0.659	1.16	0.030	0.0019	17.35	11.13	0.314			2.12	0.046	0.104	100
NCS HC 15311	alloy steel	0.838	1.05	8.00	0.038	0.020	20.50	0.821	0.145		0.275	1.98	0.026		100
NCS HC 15312	alloy steel	0.170	0.684	16.13	0.020	0.0047	8.74	3.47	1.17		0.405	3.15	0.020		100
NCS HC 15313	alloy steel	0.443	0.481	1.77	0.020	0.019	29.22	1.23	0.065		0.545	0.185	0.023		100
NCS HC 15314	alloy steel	0.028	0.034	0.100	0.0066	0.0065	11.53	15.01	2.03		0.0024	0.511	0.025		100
NCS HC 15315	alloy steel	0.116	0.675	1.14	0.030	0.095	22.93	7.03	0.209		0.117	0.151	0.065		100
		Nb	Ca	B	Sn	As	Pb	Alt	Als	Bi					
NCS HC 15310	Stainless Steel							0.0039	0.0034						
NCS HC 15311	alloy steel	0.205	0.00054	0.0019	0.0011	0.0116	0.0019	0.190	0.187	0.0029					
NCS HC 15312	alloy steel	0.613	0.0010	0.011	0.023	0.0043	0.0020	0.040	0.038	0.0014					
NCS HC 15313	alloy steel	0.024	0.0003	0.0015	0.0058	0.0050	0.0003	0.403	0.401	0.0013					
NCS HC 15314	alloy steel	0.037	0.0002	0.0004	0.058	0.0015	0.0058	0.0066	0.0051	0.0004					
NCS HC 15315	alloy steel	0.062	0.0004	0.0008	0.0070	0.0035	0.0020	0.021	0.019	0.0016					
Number	Name	C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V	N	Co	As	Unit Size (in g)
NCS HC 18301	M ₂ Al(W ₆ Mo ₅ Cr ₄ V ₂ Al)	1.05	0.44	0.3	0.023	0.0014	0.18	4.31	0.17	5.1	1.87		0.28		100
NCS HC 18302	4Cr ₄ Mn ₁₈	0.42	0.48	17.1	0.016	0.042	0.06	4.03	0.1					0.014	100
NCS HC 18303	2Cr ₁₃	0.189	0.452	0.348	0.021	0.0034	0.132	12.58	0.079					0.014	100
NCS HC 18304	214N	0.533	0.222	9.34	0.025	0.0059	3.92	21.14	0.159	0.057	0.066	0.42	0.08		100
NCS HC 18305	318	0.254	1.31	0.547	0.023	0.0027	6.6	16.95	0.095	2.13	0.077	0.144	0.044		100
NCS HC 18306	0Cr ₁₇	0.027	0.617	0.408	0.031	0.0056	0.415	16.51	0.072					0.008	100
NCS HC 18307	4Cr ₉ Si ₂	0.466	2.08	0.612	0.036	0.026	0.543	8.64	0.112	0.055	0.033			0.017	100
NCS HC 18308	4Cr ₁₀ Si ₂ Mo	0.355	2.56	0.425	0.035	0.023	0.346	10.53	0.128	0.798	0.051			0.017	100
NCS HC 18309	3Cr ₂ W ₈ V	0.4	0.25	0.25	0.017	0.016	0.46	2.72	0.05						100
NCS HC 18310	H13(4Cr ₅ MoSiV ₁)	0.34	1.17	0.4	0.017	0.01	0.15	5.3	0.08	1.18	1.04			0.029	100
		W	Al												
NCS HC 18301	M ₂ Al(W ₆ Mo ₅ Cr ₄ V ₂ Al)	6.18	0.96												
NCS HC 18309	3Cr ₂ W ₈ V	8.14													
NCS HC 18310	H13(4Cr ₅ MoSiV ₁)		0.06												
Number	Name	C	Mn	Si	P	S	Ni	Cr	Cu	Mo	Ti	Co	Al	V	Unit Size (in g)
NCS HC 41313	Stainless steel	0.085	1.63	1.29	0.025	0.016	9.95	16.98	0.940	2.74	0.418	0.300	0.585	0.036	100
NCS HC 41314	Stainless steel	0.037	0.615	1.10	0.017	0.0040	4.04	15.67	2.97	0.983	0.147	0.105	0.111	0.021	100
NCS HC 41315	Stainless steel	0.122	0.927	1.85	0.031	0.022	19.27	24.56	0.293	0.396	0.077	0.194	0.514	0.057	100
NCS HC 41317	Stainless steel	0.053	1.03	0.571	0.032	0.00071	9.19	17.17	0.383	0.154	0.309	0.132		0.059	100
NCS HC 41318	Stainless steel	0.023	1.25	0.421	0.030	0.0013	4.85	22.26	0.136	3.11	0.0014	0.047		0.038	100
		N	Nb	Sn	W	As									
NCS HC 41313	Stainless steel	0.029		(0.0034)	(0.017)	(0.0042)									
NCS HC 41314	Stainless steel	0.042	0.437	(0.0018)	(0.0014)	(0.0032)									
NCS HC 41315	Stainless steel	0.072		(0.0057)	(0.010)	(0.0035)									
NCS HC 41317	Stainless steel		0.0095	0.013	0.018	0.0047									
NCS HC 41318	Stainless steel	0.175	0.014	0.0032	0.011	0.0085									

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCS HC 20301	1Cr ₂₁	0.090	0.375	0.573	0.021	0.0077	12.94	0.102	0.051	0.0037	0.022	0.0015	0.0019	0.0088	100	
NCS HC 20302	H00Cr ₂₁ Ni ₁₀	0.029	0.520	1.71	0.031	0.014	20.49	9.72	0.134	0.0035	0.034	0.0036	0.011	0.158	100	
NCS HC 20311	1Cr ₁₈ Ni ₉ Ti	0.079	0.878	1.42	0.028	0.0095	17.92	8.83	0.113	0.125	0.062	0.561	0.014	0.172	100	
NCS HC 20312	YoCr ₁₈ Ni ₉ MoS ₁	0.071	0.619	1.60	0.031	0.061	17.66	8.48	0.222	0.0043	0.033		0.022	0.502	100	
NCS HC 20313	Ni ₂₅ Cr ₁₈ Mo ₂ Cu ₂	0.082	0.465	0.526	0.027	0.0050	17.37	26.44	1.71	0.0099	0.023		0.031	2.63	100	
		Co	Sn	As												
NCS HC 20301	1Cr ₁₃	0.021	0.0056	0.0091												
NCS HC 20302	H00Cr ₂₁ Ni ₁₀	0.369	0.0060	0.0088												
NCS HC 20311	1Cr ₁₈ Ni ₉ Ti	0.086	0.010	0.0071												
NCS HC 20312	YoCr ₁₈ Ni ₉ MoS ₁	0.176	0.012	0.0073												
NCS HC 20313	Ni ₂₅ Cr ₁₈ Mo ₂ Cu ₂	0.097	0.0070	0.0052												
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Ca			
NCS HC 21301	1Cr ₁₇ Ni ₂ Ti	0.126	0.560	0.563	0.0126	0.017	16.66	1.95	0.107						100	
NCS HC 21302	R00Cr ₁₈ Mo ₂ Ca	0.019	0.845	0.286	0.0284	0.0141	17.45	0.235	0.082	0.027		2.11	0.0048		100	
NCS HC 21305	Cr ₁₂	2.223	0.171	0.146	0.0226	0.0094	12.18	0.095	0.041	0.030	0.028	0.0067			100	
NCS HC 21306	2Cr ₁₃	0.200	0.177	0.501	0.0238	0.0160	12.49	0.256	0.009	0.0167	0.016	0.0219			100	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Co	Ti		
NCS HC 21309	Shape Memory Alloy	0.026	15.95	0.027	0.0008	5.21	6.69	12.04	0.086	0.257	0.099	0.047	0.031	0.015	100	
		V	Sn	Nb												
NCS HC 21309	Shape Memory Alloy	0.035	0.0064	0.108												
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	W							
NCS HC 23301	18Cr ₂ Ni ₄ W	0.171	0.273	0.486	0.0215	0.0188	1.726	4.22	0.994							150
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	V	Mo	R _e						
NCS HC 24312	Cr ₁₄ Mo ₄ VRE	1.067	0.254	0.098	0.014	0.0036	14.83	1.35	4.06	0.041					100	

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	Sn	Als	V	
NCS HC 28302	Stainless steel	0.049	0.583	0.876	0.024	0.0057	17.23	9.47	0.063	0.0034	0.042	0.0036	0.033	0.042	100
NCS HC 28303	Stainless steel	0.196	0.776	0.324	0.017	0.0043	12.24	0.086	0.012	0.022	0.0034			0.024	100
NCS HC 28304	Die Steel	0.407	1.06	0.315	0.015	0.013	5.08	0.037	0.017	(0.0038)	1.20		0.0056	0.946	100
NCS HC 28305	Stainless steel	0.322	0.613	0.83	0.018	0.017	8.63	0.148	0.47	0.004	0.016	0.0037	0.023	0.014	100
NCS HC 28306	Stainless steel	0.329	0.397	0.433	0.018	0.027	11.95	2.66	0.08	0.0031	0.026	0.0049	0.0019	0.016	100
NCS HC 28307	Stainless Steel	0.193	0.905	0.49	0.022	0.01	19.4	6.48	0.079	0.0052	0.021	0.0028	0.034	0.029	100
NCS HC 28308	Heat resisting alloy	0.392	2.41	0.508	0.019	0.022	10.09	0.247	0.093	0.0065	1.09	0.0047	0.0031	0.015	100
NCS HC 28309	Heat resisting alloy	0.54	0.433	0.321	0.016	0.014	14.75	13.68	0.079	1.88	0.466	0.0052	0.035	0.024	100
NCS HC 28310	Heat resisting alloy	0.157	0.827	0.8	0.021	0.023	13.31	13.9	0.03	2.75	0.24	0.004	0.067	0.02	100
NCS HC 28311	Heat resisting alloy	0.182	0.865	0.37	0.019	0.025	17.3	1.33	0.074	0.0032	0.023	0.004	0.0025	0.021	100
NCS HC 28312	Heat resisting alloy	0.178	0.542	2.37	0.023	0.0084	22.71	16.2	0.058	0.0034	0.0071	0.0023	0.045	0.031	100
		Co	As	Ti	Alis	Alt	B	Zn	Sb						
NCS HC 28302	Stainless steel	0.041	0.0041	0.233											
NCS HC 28303	Stainless steel	0.018	0.0022	0.0011											
NCS HC 28304	Die Steel	0.011	(0.0021)	0.0049	0.0040	0.0096									
NCS HC 28305	Stainless steel	0.019	0.0054	0.076		0.027	0.0002	0.0034	0.0018						
NCS HC 28306	Stainless steel	0.057	0.0049	0.029		0.0073		0.0018	0.0016						
NCS HC 28307	Stainless Steel	0.095	0.0046	0.206		0.037		0.0016	0.0015						
NCS HC 28308	Heat resisting alloy	0.019	0.0054	0.0032		0.0057		0.0009	0.0021						
NCS HC 28309	Heat resisting alloy	0.035	0.009	0.0011		0.038	0.0003	0.0018	0.0016						
NCS HC 28310	Heat resisting alloy	0.147	0.0041	0.0011		0.074	0.0004	0.005	0.0004						
NCS HC 28311	Heat resisting alloy	0.051	0.0051	0.0011		0.0061		0.002	0.0016						
NCS HC 28312	Heat resisting alloy	0.186	0.0038	0.051		0.053		0.0036	0.0006						
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Al(t)	Co	
NCS HC 28313	Stainless Steel	0.039	0.425	1.07	0.037	0.016	18.31	8.19	0.399	0.027	0.106	0.002*		0.208	50
NCS HC 28314	Stainless Steel	0.021	0.414	0.94	0.034	0.0028	18.21	8.11	0.043	0.025	0.089	0.006		0.216	50
NCS HC 28315	Stainless Steel	0.11	0.78	0.841	0.024	0.0082	23.71	18.02	0.089	0.115	0.077	0.003*	0.0056	0.102	50
NCS HC 28316	Stainless Steel	0.067	0.435	1.1	0.028	0.021	16.8	10.39	0.166	2.01	0.048	0.006*	0.012	0.063	50
NCS HC 28317	Stainless Steel	0.018	0.317	1.17	0.042	0.0057	16.61	10.34	0.334	2.05	0.07	0.002*		0.185	50
NCS HC 28318	Stainless Steel	0.134	0.505	0.456	0.027	0.0067	16.26	1.78	0.127	0.152	0.074	0.002		0.051	50
NCS HC 28319	Stainless Steel	0.046	0.643	0.742	0.027	0.013	15.88	3.85	3.24	0.259	0.075	0.002		0.115	50
NCS HC 28320	Stainless Steel	0.013	0.464	1.17	0.033	0.0021	19.67	24.23	1.49	4.47	0.086	0.002*	0.024	0.096	50
		Nb	Sn	Pb	As										
NCS HC 28313	Stainless Steel		0.0051	0.0001*	0.0035										
NCS HC 28314	Stainless Steel		0.0001*	0.0001*	0.0025										
NCS HC 28315	Stainless Steel	0.016	0.0025	0.0004	0.0042										
NCS HC 28316	Stainless Steel	0.027	0.0034	0.0005	0.0037										
NCS HC 28317	Stainless Steel		0.0073	0.0001*	0.0055										
NCS HC 28318	Stainless Steel		0.0058	0.0001*	0.0064										
NCS HC 28319	Stainless Steel	0.232	0.0064	0.0002*	0.0048										
NCS HC 28320	Stainless Steel	0.042	0.0043	0.0001*	0.0053										

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number		Name	C	Si	Mn	P	Chemical Composition(Percent)				Unit Size						
							S	Cr	Ni	Al					(in g)		
NCS HC 29322	Cr ₁₄		0.077	1.487	13.49	0.074	0.0166	14.00	1.63						150		
NCS HC 29323	Cr ₁₃ SiAl		0.153	1.086	0.646	0.029	0.029	12.46	0.510	0.702					150		
Number		Name	C	Si	Mn	P	Chemical Composition(Percent)				Unit Size						
							S	Cr	Ni	Mo					(in g)		
NCS HC 37301	High Manganese Steel		1.25	0.464	11.59	0.073	0.0056								20		
NCS HC 37302b	High Manganese Steel		1.26	0.595	12.00	0.079	0.013								20		
NCS HC 37303	Stainless Steel		0.032	0.78	1.45	0.026	0.019	16.14	10.30	2.28					100		
NCS HC 37304	0Cr ₁₈ Ni ₉		0.075	0.77	1.44	0.033	0.025	8.56							100		
NCS HC 37305	0Cr ₁₈ Ni ₁₀ Ti		0.086	0.84	1.45	0.032	0.014	17.45							100		
NCS HC 37306	1Cr ₁₈ Ni ₉ Ti		0.134	0.021	1.06	0.033	0.021	17.01							100		
NCS HC 37307	1Cr ₁₃		0.144	0.56	0.71	0.038	0.028	12.07							100		
NCS HC 37308	2Cr ₁₃		0.232	0.82	0.80	0.042	0.027	12.42							100		
Number		Name	C	Si	Mn	P	Chemical Composition(Percent)				Unit Size						
							S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)	
NCS HC 41301	Ni ₈₀ Cr ₂₀		0.051	1.15	0.601	0.0015	0.0023	21.50	75.10	0.012	0.080		0.221			150	
NCS HC 41303	6Cr ₄ W ₂ Mo ₂		0.600	0.980	0.968	0.023	0.0079	4.45		0.084		0.938		2.14	2.44	150	
NCS HC 41307c	1Cr ₁₈ Ni ₉ Ti		0.050	0.512	0.803	0.029	0.0050	18.56	9.86	0.179		0.057	0.473	0.057	0.151	100	
NCS HC 41308	Cr ₁₂		2.20	0.258	0.312	0.22	0.0105	12.62	0.109	0.088		0.054			0.094	150	
NCS HC 41309	2Cr ₁₃		0.334	0.519	0.211	0.025	0.0073	12.79	0.126	0.048		0.039			0.016	150	
NCS HC 41310b	CrNi		0.06	0.27	0.9	0.041	0.014	18.04	8.06	0.47		0.066			0.35	150	
			Co	Sn	As	N	Fe	Alt	Als	B	N	Al*	Ti*				
NCS HC 41301	Ni ₈₀ Cr ₂₀						1.23										
NCS HC 41307c	1Cr ₁₈ Ni ₉ Ti		0.052	0.017	0.0067	0.015	0.083		0.084								
NCS HC 41310b	CrNi		0.164	0.012	0.0061					0.0053	0.125	0.005	0.001				
Number		Name	C	Si	Mn	P	Chemical Composition(%)				Unit Size						
							S	Cr	Ni	Mo	Cu	V	Ti	As	W	(in g)	
NCS HC 37309	Stainless Steel		0.098	0.1	8.5	0.035	0.008	17.26	3.88	0.099	0.269	0.055				100	
NCS HC 37310	Stainless Steel		0.132	0.764	8.33	0.044	0.016	16.76	5.42	0.051	1.11	0.099				100	
NCS HC 37311	Stainless Steel		0.138	0.472	0.972	0.028	0.018	16.18	6.19	0.092	0.189	0.051		0.01	0.007	100	
NCS HC 37312	Stainless Steel		0.106	0.443	1.71	0.027	0.024	24.33	19.12	0.147	0.1	0.1	0.019		0.01	100	
			Co	N													
NCS HC 37309	Stainless Steel		0.112	0.076													
NCS HC 37310	Stainless Steel		0.15	0.101													
NCS HC 37311	Stainless Steel		0.093	0.128													
NCS HC 37312	Stainless Steel		0.11	0.078													

Section 1 Iron, Steel & Alloy(Chip)

5)Tool Steel

Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo			
NCS HC 11401a	W ₁₈ Cr ₄ V	0.87	0.23	0.24	0.044	0.004	3.72			1.19	19.16	0.28	150		
NCS HC 11402	W ₆ Mo ₅ Cr ₄ V ₂	0.72	0.10	0.28	0.027	0.007	3.90			2.09	6.77	4.88	150		
NCS HC 11403	Cr ₁₂ W	2.00	0.297	0.294	0.049	0.0053	11.71	0.113			0.96		150		
NCS HC 11403a	Cr ₁₂ W	1.96	0.18	0.31	0.048	0.088	11.99	0.12	0.061		0.97		150		
NCS HC 11404	5CrNiMo	0.52	0.16	0.56	0.020	0.005	0.57	1.55				0.20	150		
NCS HC 11405	W ₂	1.14	0.274	0.287	0.014	0.0046	0.183	0.073	0.040		2.31		150		
NCS HC 11405a	W ₂	1.25	0.16	0.38	0.035		0.14	0.18			2.27		150		
NCS HC 11406	6SiMnW	0.65	1.23	0.65	0.017	0.016	0.026				1.42		150		
NCS HC 11406a	6SiMnW	0.64	0.97	0.75	0.011	0.009		0.23	0.032		1.44		150		
NCS HC 11407	3W ₄ Cr ₂ V	0.34	0.30	0.11	0.013	0.009	2.44	0.087	0.034	0.65	3.61		150		
NCS HC 11408	9V	1.07	0.18	0.44	0.044	0.006		0.24		0.41			150		
NCS HC 11409	SiMnV	1.42	0.64	0.74	0.052	0.033		0.27		0.31			150		
NCS HC 11410	9Mn ₂ V	0.84	0.23	2.02	0.051	0.006	0.10	0.034		0.16			150		
NCS HC 11411	5CrW ₂ Si	0.50	0.60	0.40	0.030	0.031	1.15	0.14	0.048		2.30		150		
NCS HC 11412	T ₇	0.66	0.27	0.66	0.030	0.019	0.31	0.24	0.023				150		
NCS HC 11412a	T ₇	0.70	0.26	0.79	0.035	0.028	0.005	0.019	0.024				150		
NCS HC 11412b	T ₇	0.72	0.34	0.18	0.013	0.003		0.013	0.024				150		
NCS HC 11413	T ₈	0.79	0.25	0.28	0.029	0.007							150		
NCS HC 11413a	T ₈	0.82	0.30	0.78	0.021	0.015							150		
NCS HC 11414	T ₁₀	1.05	0.33	0.41	0.011	0.009	0.63	0.021	0.022	0.23			150		
NCS HC 11415	T ₁₁	1.15	0.24	0.34	0.019	0.005	0.050	0.039	0.023				150		
NCS HC 11416	T ₁₂	1.20	0.21	0.19	0.012	0.009	0.044	0.030	0.095				150		
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)			
NCS HC 13401	T ₈ A	0.81	0.18	0.23	0.013	0.0065							100		
NCS HC 13402	T ₁₃ A	1.26	0.25	0.28	0.018	0.0105							100		
NCS HC 13403	T ₁₁ A	1.155	0.46	1.14	0.043	0.038							100		
NCS HC 13404	T ₁₂ A	1.18	0.32	0.70	0.010	0.0065							100		
Number	Name	C	Si	Mn	P	S	Cu	Chemical Composition(Percent)						Unit Size (in g)	
NCS HC 14401	T ₈	0.785	0.563	0.614	0.0115	0.029	0.064							150	
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	Unit Size (in g)
NCS HC 17401	W ₁₈ Cr ₄ V	0.762	0.241	0.280	0.0241	0.026	4.03	0.040	0.038		1.30	18.16	0.245		100
NCS HC 17402	W ₆ Mo ₅ Cr ₄ V ₂	0.855	0.232	0.275	0.0261	0.011	4.08	0.046	0.041		2.02	5.99	4.84		100
NCS HC 17403	3Cr ₂ W ₈ V	0.359	0.170	0.298	0.0211	0.021	2.48	0.0208	0.030		0.27	8.39	0.055		100
NCS HC 17405	High Speed Steel	0.941	0.521	0.441	0.023	0.028	1.99	0.095			0.18	19.22	0.122		100
NCS HC 17406	High Speed Steel	0.78	0.230	0.427	0.024	0.020	3.64	0.134			0.44	18.72	0.176		100
NCS HC 17407	High Speed Steel	0.710	0.183	0.268	0.029	0.0064	4.29	0.187			1.05	17.64	0.266		100
NCS HC 17408	High Speed Steel	0.577	0.383	0.233	0.015	0.0043	2.70	0.231			0.81	16.24	0.330		100
NCS HC 17409	High Speed Steel	0.493	0.493	0.343	0.304	0.0048	4.78	0.278			1.49	14.96	0.411		100
NCS HC 17414	High Speed Steel	0.332	1.16	2.719	0.0228	0.0177	4.43	0.862		1.955	1.083	9.22	6.16	2.989	100
		Nb													
NCS HC 17414	High Speed Steel	0.497													

Section 1 Iron, Steel & Alloy(Chip)

5)Tool Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Sn	Co	
NCS HC 21401	High Speed Steel	0.828	0.226	0.283	0.028	0.0065	4.08	0.083	0.140	1.33	9.23	3.13	0.017	0.018	150
		Ti	Als												
		0.0044	0.013												
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	R _E	Unit Size (in g)	
NCS HC 23402	Cr ₈ Mo ₄ VR _E	0.85	0.39	0.35	0.034	0.014	4.07			0.99		4.38	0.035	150	
NCS HC 23404	W ₉ Mo ₃ Cr ₄ V	0.823	0.303	0.303	0.027	0.017	3.99	0.100	0.138	1.44	9.17	2.92		100	
NCS HC 23405	High-speed tool Steel	0.888	0.267	0.308	0.026	0.018	3.99	0.103	0.147	1.94	6.13	4.85		100	
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Unit Size (in g)	
NCS HC 24403	High Speed Steel	0.731	0.207	0.286	0.22	0.22	2.96	0.156	0.249		0.44	15.99	0.42	100	
NCS HC 24404	High Speed Steel	0.909	0.309	0.244	0.025	0.026	3.25	0.203	0.223		0.84	14.41	0.88	100	
NCS HC 24405	High Speed Steel	0.821	0.443	0.307	0.025	0.024	3.54	0.383	0.211	0.059	1.23	11.71	1.57	100	
NCS HC 24407	High Speed Steel	1.09	0.352	0.405	0.034	0.034	4.26	0.201	0.248		2.77	6.85	3.75	100	
NCS HC 24408	High Speed Steel	0.996	0.648	0.293	0.026	0.026	5.19	0.224	0.203	0.128	4.51	1.80	6.52	100	
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti	Unit Size (in g)
NCS HC 28401	T ₁₀	0.985	0.286	0.211	0.027	0.012	0.070	0.037	0.086						100
NCS HC 28402	High Speed Steel	0.847	0.190	0.296	0.023	0.012	3.99	0.096	0.122	1.93	6.14	5.06	0.023	0.0013	100
		Als													
NCS HC 28402	High Speed Steel	0.0020													
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Unit Size (in g)		
NCS HC 41401	T ₈	0.822	0.223	0.267	0.008	0.0075	0.101	0.035	0.084	0.001			150		
NCS HC 41403	T ₉	0.890	0.209	0.252	0.021	0.0115							150		
NCS HC 41404	W ₁₈ Cr ₄ V	0.740	0.165	0.178	0.025	0.0015	4.18			1.30	17.97		150		
NCS HC 41406	W ₆ Mo ₅ Cr ₄ V ₂	0.874	0.367	0.301	0.020	0.017	4.12	0.317	0.080	1.76	6.15	4.73	150		

Section 1 Iron, Steel & Alloy(Chip)

6) Superalloy, Precious Alloy & Heat Resisting Alloy

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCS HC 11501	GH49	0.032					9.60			3.56	0.30	1.83	5.82	5.45	100
NCS HC 11503	GH37	0.10	0.59	0.45	0.009	0.013	16.02			2.27	0.38	2.29	6.93	4.04	100
NCS HC 11505	GH143	0.19	0.08	0.92	0.0015	0.004	15.13			4.83		1.32		5.57	100
NCS HC 11506	GH130		0.04		0.004	0.0013	14.97	37.53		1.95		2.93	5.07		100
NCS HC 11508	GH131	0.08	0.72	0.73	0.012	0.003	20.94	27.75					5.66	2.96	100
NCS HC 11510	GH35-1	0.13	0.80	0.75	0.016	0.016	23.00	36.43		0.50		1.19	3.38		100
NCS HC 11511	GH35-2	0.10	0.62	0.61	0.013	0.029	21.00	35.95		0.44			2.66		100
NCS HC 11512	GH36	0.37	0.43	8.56	0.012	0.029	12.81	8.52			1.41	0.06		1.28	100
NCS HC 11513	GH39	0.031	0.056	0.30		0.004	18.94		0.009	0.25		0.60		1.90	100
NCS HC 11514	GH128	0.025	0.55	0.28		0.004	20.10			0.34			8.15	8.09	100
NCS HC 11515	K3	0.15	0.06			0.003	10.92			5.53		2.72	4.91	3.98	100
NCS HC 11516	K13	0.059	0.11	0.044	0.006	0.004	14.91	35.37		1.82		3.58			100
NCS HC 11517	4J29		0.077	0.35			0.21	28.91							100
NCS HC 11519	Heat Resisting Steel	0.400	1.85	0.95	0.015	0.0041	25.58	34.86			0.041		0.93	0.348	100
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Co	Nb	Zr	B	N	Fe	Ce							
NCS HC 11501	GH49	14.87			0.028		(0.48)	0.0023							
NCS HC 11503	GH37				0.025		(4.09)								
NCS HC 11505	GH143	19.73			0.017		(1.07)								
NCS HC 11506	GH130				0.018										
NCS HC 11508	GH131		1.03		0.0015	0.11									
NCS HC 11510	GH35-1							0.014							
NCS HC 11511	GH35-2		1.43					0.013							
NCS HC 11512	GH36		0.44												
NCS HC 11513	GH39		0.82				(0.42)								
NCS HC 11514	GH128			0.032	0.007		(1.94)	0.007							
NCS HC 11515	K3	5.41		0.096	0.034		(0.22)	0.015							
NCS HC 11516	K13				0.100										
NCS HC 11517	4J29	17.17													
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag	As	Bi	Ca	Cd	In	Mg	Pb	Sb	So	Sn	Te	Ti	
NCS HC 11520	Superalloy Trace Elements	3.5	17	4.2	42	7.0	11	82	12	204	43	103	3.0	8.5	150
NCS HC 11521	Superalloy Trace Elements	4.6	11	0.4	21	4.6	2.6	16	4.1	95	16	53	11	22	150
NCS HC 11522	Superalloy Trace Elements	5.3	15	0.4	11	1.8	30	15	11	59	11	72	2.1	51	150
NCS HC 11523	Superalloy Trace Elements	0.3	72	0.5	32	1.9	0.4	53	2.2	7.4	43	1040	0.5	83	150
NCS HC 11524	Superalloy Trace Elements	0.7	72	3.4	5.3	1.6	9.2	111	91	6.2	53	92	83	8.1	150
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Zn	Ga												
NCS HC 11520	Superalloy Trace Elements	24	29												
NCS HC 11521	Superalloy Trace Elements	32	32												
NCS HC 11522	Superalloy Trace Elements	105	108												
NCS HC 11523	Superalloy Trace Elements	20	28												
NCS HC 11524	Superalloy Trace Elements	6.0	63												

Section 1 Iron, Steel & Alloy(Chip)

6) Superalloy, Precious Alloy & Heat Resisting Alloy

Number	Name	Chemical Composition(μg/g)														Unit Size (in g)	
		Ag	As	B	Bi	Cd	Ce	Ci	Hf	Ga	Ge	In	P	Pb			
NCS HC 11525	Trace elements in superalloy	0.78	6.7	90	0.14	0.31	0.38	571	3.5	31	13	0.88	41	3.4	100		
NCS HC 11526	Trace elements in superalloy	1.0	14	47	0.19	<0.02	1.8	363	7.4	34	24	7.2	36	3.7	100		
NCS HC 11527	Trace elements in superalloy	2.5	96	25	1.2	<0.02	0.45	172	3.8	38	38	2.6	55	4.7	100		
NCS HC 11528	Trace elements in superalloy	4.4	44	24	2.0	<0.02	0.028	94	33	52	75	31	131	8.2	100		
NCS HC 11529	Trace elements in superalloy	5.4	25	13	1.8	<0.02	0.19	53	12	49	27	10	80	11	100		
		Sb	Sc	Se	Sn	Te	Ti	Zn									
NCS HC 11525	Trace elements in superalloy	1.4	1.3	9.8	3.2	28	0.13	12									
NCS HC 11526	Trace elements in superalloy	3.3	2.7	12	8.3	31	0.16	13									
NCS HC 11527	Trace elements in superalloy	16	1.2	4.1	18	7.5	4.3	14									
NCS HC 11528	Trace elements in superalloy	49	1.2	2.5	45	2.3	3.9	15									
NCS HC 11529	Trace elements in superalloy	33	0.6	2.2	43	1.3	1.1	13									
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Fe	Mo	B	Al ₃	Nb	Zr	Ti			
NCS HC 11530	Nickel Base Super Alloy	0.120	0.249	0.276	0.0077	0.0046	12.81	0.454	4.53	0.011	6.14	2.15	0.094	0.850	50		
		Pb	Bi														
NCS HC 11530	Nickel Base Super Alloy	0.00023 (0.00006)															
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	Co					
NCS HC 20503	4J29	0.0015	0.106	0.307	0.0019	0.0056	0.148	28.80	0.072	0.0040	4.13	17.77			100		
NCS HC 20504	1J79	0.008	0.36	1.08	0.0009	0.0030									100		
NCS HC 20505	2J64	0.73	0.25	0.26	0.009	0.004	79.56			0.072	3.98			100			
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	W	Mo	Co			
NCS HC 23505	GH130	0.038	0.19	0.28	0.08	0.05	14.28	37.83	1.88		2.89	5.87			100		
NCS HC 23507	G263	0.06	0.26	0.47	0.0028		20.08	0.078		0.33	2.15			20.58	100		
NCS HC 23511	F176	0.057	0.61	0.91	0.023	0.059	16.05	9.20	0.12				0.04	0.75	100		
		B	Se	Fe													
NCS HC 23505	GH130	0.016	0.106														
NCS HC 23507	G263	0.0038	0.255														
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Ni	V	Co								
NCS HC 24513	2J9	0.070	0.61	0.74	0.0038	0.0079	0.93	8.82	52.08							100	
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo			
NCS HC 57511	GH4169	0.019	0.084	0.0016*	0.0012	0.0056	18.59	52.36	0.0021	0.42	0.16	0.93	0.23	3.08	100		
		Co	B	Nb	Zr												
NCS HC 57511	GH4169	1.03	0.011	5.09	0.018												
Number	Name	Chemical Composition(Percent)														Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Fe	Ti	Co	Mo			
NCS HC 41501	Nickel-based superalloy	0.043	0.071	0.124	0.0023	0.0006	20.69	63.72	0.016		3.50	0.011	8.37		100		
NCS HC 41502	Nickel-based superalloy	0.027	0.080	0.057	0.0033	0.0005	18.56	52.27	0.023	0.635	18.54	1.03	0.111	3.28	100		
NCS HC 41503	Corrosion-resisting alloy	0.071	0.36	0.807	0.015	0.0006	20.72	32.27	0.038	0.299	0.49		0.050	0.297	100		
		Nb	Ta*	B	Co*	Ta**											
NCS HC 41501	Nickel-based superalloy	3.19				0.011	0.001										
NCS HC 41502	Nickel-based superalloy	5.15	0.008	0.0025													

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Zn	Sb	
NCS HS11011b	Pure iron	0.0023	0.0023	0.013	0.0014	0.0014	0.0066	0.0003	0.0027	0.0045	0.00015	0.00029	ø38×40
NCS HS11011b	Pure iron	Sn	As	B	Ca	Co	N	V	Al	Bi	Mg	Ti	
		0.00015	0.0026	0.00023	0.0003	0.0012	0.0045	<0.0001	<0.0001	<0.00001	(0.00006)	<0.0001	
NCS HS11011b	Pure iron	Pb	Nb	W	Ta	Ce#	Hf#	La#	Se#	Cd#	Te#	Zr#	
		(0.00002)	(0.00004)	(0.00004)	<0.00001	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Zr	B	
NCS HS 11706-3	Silicon Steel	0.106	1.03	0.546	0.045	0.029	0.187	0.571	0.146	0.026	0.017	0.012	ø38×30
NCS HS 11706-5	Silicon Steel	0.040	4.16	1.10	0.020	0.031	0.042	0.101	0.063	0.010	0.0035	0.0054	ø38×30
NCS HS 11706-3	Silicon Steel	Sn	Sb	N	Als	Al _i							
		0.019	0.0012	(0.0058)	0.779	0.783							
NCS HS 11706-5	Silicon Steel	0.0055	0.022	0.0026	0.065	0.068							
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	
NCS HS 11708a-1	Alloy structure steel	0.200	0.222	0.680	0.038	0.0084	2.97	3.53	0.355	0.210	0.189	0.161	ø38×30
NCS HS 11708a-2	Alloy structure steel	0.144	0.132	3.60	0.053	0.074	0.95	4.33	0.016	0.019	0.478	0.226	ø38×30
NCS HS 11708a-3	Alloy structure steel	0.288	0.290	0.89	0.035	0.027	2.27	1.29	0.136	0.556	0.346	0.296	ø38×30
NCS HS 11708a-4	Alloy structure steel	0.046	0.051	2.42	0.048	0.017	4.40	2.54	0.441	1.40	0.449	0.035	ø38×30
NCS HS 11708a-5	Alloy structure steel	0.251	0.605	1.04	0.025	0.031	1.36	1.77	0.046	0.864	0.118	0.073	ø38×30
NCS HS 11708a-6	Alloy structure steel	0.315	0.391	1.88	0.029	0.049	3.27	1.02	0.245	0.118	0.273	0.136	ø38×30
NCS HS 11708a-7	Alloy structure steel	0.505	1.10	0.325	0.0062	0.065	0.703	0.773	0.518	0.305	0.013	0.028	ø38×30
NCS HS 11708a-8	Alloy structure steel	0.425	0.830	0.553	0.017	0.0009	0.177	0.621	0.636	0.423	0.055	0.061	ø38×30
NCS HS 11708a-1	Alloy structure steel	W	Alt	As	Sn	Pb	B	Ce	N				
		0.429	0.016	0.048	0.048	(0.0008)	0.0064	(0.0002)	0.014				
NCS HS 11708a-2	Alloy structure steel	0.092	0.012	0.054	0.057	(0.0003)	0.0006		0.007				
NCS HS 11708a-3	Alloy structure steel	0.804	0.100	0.021	0.017	0.0034	0.0029		0.0085				
NCS HS 11708a-4	Alloy structure steel	1.98	0.0067	0.032	0.036	0.0015	0.0016	(0.0001)	0.020				
NCS HS 11708a-5	Alloy structure steel	1.23	0.0098	0.093	0.011	0.0024	0.0055	(0.00009)	0.010				
NCS HS 11708a-6	Alloy structure steel	0.201	0.147	0.056	0.027	(0.0002)	0.0096		0.015				
NCS HS 11708a-7	Alloy structure steel	0.602	0.311	0.0067	0.0042	0.0019	0.025	(0.0001)	0.0027				
NCS HS 11708a-8	Alloy structure steel	0.362	0.602	0.0086	0.0087	0.0013	0.019	0.045	0.0028				
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	
NCS HS 11709a-2	Stainless Steel	0.139	0.555	1.06	0.022	0.013	14.37	14.58	0.133	0.475	0.577	0.305	ø38×30
NCS HS 11709a-3	Stainless Steel	0.183	0.352	0.981	0.015	0.0098	10.66	19.13	0.057	0.577	0.735	0.606	ø38×30
NCS HS 11709a-4	Stainless Steel	0.060	0.971	0.704	0.035	0.032	19.73	11.24	0.258	0.253	0.198	0.169	ø38×30
NCS HS 11709a-5	Stainless Steel	0.224	0.154	1.92	0.0057	0.0045	7.65	22.77	0.014	0.774	0.432	0.809	ø38×30
NCS HS 11709a-6	Stainless Steel	0.027	1.06	0.595	0.057	0.042	24.40	7.34	0.326	0.170	0.078	0.053	ø38×30
NCS HS11709a-2	Stainless Steel	Co	Sn	As	Pb	Al _t							
		0.166	0.015	0.021	0.00017	0.029							
NCS HS 11709a-3	Stainless Steel	0.222	0.0089	0.024	0.00013	0.019							
NCS HS 11709a-4	Stainless Steel	0.078	0.033	0.011	0.00030	0.096							
NCS HS 11709a-5	Stainless Steel	0.131	0.0027	0.030	0.0003	0.015							
NCS HS 11709a-6	Stainless Steel	0.031	0.042	0.0066	0.0002	0.174							

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Mg	Sn	N	
NCSHS 11712a-1	Nitrogen Cast Iron	1.75	3.40	0.080	0.580	0.119	2.48	0.030	0.025	0.031	0.021	0.0006	0.0031	0.015	ø28×30
NCSHS 11712a-2	Nitrogen Cast Iron	2.22	2.44	0.301	0.043	0.058	2.13	0.341	0.458	0.087	0.055	0.0085	0.044	0.024	ø28×30
NCSHS 11712a-3	Nitrogen Cast Iron	2.55	1.50	0.878	0.071	0.045	0.417	0.519	0.641	0.354	0.085	0.024	0.021	0.024	ø28×30
NCSHS 11712a-4	Nitrogen Cast Iron	3.16	1.96	0.462	0.396	0.017	1.40	0.778	0.921	0.428	0.166	0.025	0.024	0.0073	ø28×30
NCSHS 11712a-5	Nitrogen Cast Iron	3.52	1.17	0.311	0.420	0.019	0.766	1.03	0.389	0.629	0.324	0.021	0.013	0.0047	ø28×30
NCSHS 11712a-6	Nitrogen Cast Iron	4.02	0.163	1.41	0.021	0.026	0.112	1.89	1.83	0.726	0.509	0.104	0.057	0.013	ø28×30
NCSHS 11712a-7	Nitrogen Cast Iron	3.94	0.918	1.38	0.085	0.0048	1.05	1.37	1.10	0.168	0.309	0.056	0.134	0.0063	ø28×30
		Ti	Al	La	Ce										
NCSHS 11712a-1	Nitrogen Cast Iron	0.038	0.248	<0.0001	<0.0001										
NCSHS 11712a-2	Nitrogen Cast Iron	0.065	0.060	0.010	0.0010										
NCSHS 11712a-3	Nitrogen Cast Iron	0.027	0.034	0.0061	0.027										
NCSHS 11712a-4	Nitrogen Cast Iron	0.065	0.0073	<0.0001	<0.0001										
NCSHS 11712a-5	Nitrogen Cast Iron	0.161		<0.0001	<0.0001										
NCSHS 11712a-6	Nitrogen Cast Iron	0.238	0.019	<0.0001	<0.0001										
NCSHS 11712a-7	Nitrogen Cast Iron	0.114	0.214	<0.0001	<0.0001										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb	W	Co	
NCSHS 11714a-1	Medium-Low Alloy Steel	1.17	0.394	1.91	0.0052	0.034	4.48	0.063	0.097	0.045	0.033	0.302	0.42	0.031	D38×30
NCSHS 11714a-2	Medium-Low Alloy Steel	0.075	0.97	0.131	0.027	0.012	1.99	1.23	1.19	0.253	0.24	0.191	1.94	0.172	D38×30
NCSHS 11714a-3	Medium-Low Alloy Steel	0.921	1.17	1.14	0.011	0.065	3.39	0.301	0.628	0.478	0.061	0.272	0.754	0.508	D38×30
NCSHS 11714a-4	Medium-Low Alloy Steel	0.44	1.99	0.793	0.033	0.027	1.06	0.91	2.05	0.338	0.498	0.142	1.58	0.25	D38×30
NCSHS 11714a-5	Medium-Low Alloy Steel	0.73	0.113	1.58	0.055	0.0051	0.215	0.606	4.57	0.607	0.114	0.016	0.027	0.073	D38×30
NCSHS 11714a-6	Medium-Low Alloy Steel	0.249	0.85	0.402	0.04	0.017	0.6	1.49	2.95	0.123	0.388	0.045	1.17	0.361	D38×30
		Ti	Al	La	Ce	Bs	Bt	As	Sn	Pb	Sb	Zr	Bi	Ca	
NCSHS 11714a-1	Medium-Low Alloy Steel	0.478	0.489	0.223	0.226	0.02	0.026	0.0073	0.0012	0.0006	0.0004	0.0054	0.0007	(0.0004)	
NCSHS 11714a-2	Medium-Low Alloy Steel	0.188	0.19	0.77	0.78	0.0094	0.011	0.0012	0.0004	0.00007#	(0.0002)	0.024	<0.0001#	(0.0005)	
NCSHS 11714a-3	Medium-Low Alloy Steel	0.319	0.322	0.071	0.072	0.013	0.017	0.0017	0.0069	(0.0001)	0.0003	0.0064	0.0004	(0.0005)	
NCSHS 11714a-4	Medium-Low Alloy Steel	0.029	0.03	0.025	0.026	0.0051	0.0063	0.0012	(0.0007)	(0.0006)	0.0019	0.0019	<0.0001*	(0.0005)	
NCSHS 11714a-5	Medium-Low Alloy Steel	0.078	0.078	1.13	1.14	(0.0002)	(0.0004)	0.0031	0.0018	0.003	0.0082	0.218	(0.0001)	(0.0004)	
NCSHS 11714a-6	Medium-Low Alloy Steel	0.107	0.11	0.542	0.552	0.0007	0.0007	0.0012	0.0106	0.0011	0.0082	0.113	0.0006	(0.0005)	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Co	Als	Alt	
NCSHS 11715a-1	Stainless Steel	0.298	1.89	2.56	0.0069	0.0037	27.89	23.11	0.791	0.483	0.558	0.039	(0.004)	(0.006)	ø36×30
NCSHS 11715a-2	Stainless Steel	0.084	0.289	0.629	0.033	0.020	23.62	4.68	0.282	1.10	0.087	0.459	1.77	1.80	ø36×30
NCSHS 11715a-3	Stainless Steel	0.040	0.652	0.821	0.021	0.021	20.62	8.72	1.41	0.069	0.252	0.229	0.344	0.351	ø36×30
NCSHS 11715a-4	Stainless Steel	0.011	0.980	1.19	0.026	0.028	17.94	12.11	4.13	2.13	0.440	0.158	0.085	0.088	ø36×30
NCSHS 11715a-5	Stainless Steel	0.0052	0.112	0.221	0.051	0.037	15.39	15.02	0.458	0.281	0.106	0.212	1.21	1.22	ø36×30
NCSHS 11715a-6	Stainless Steel	0.213	1.50	1.91	0.019	0.044	11.14	19.01	3.05	2.93	0.319	0.075	0.034	0.037	ø36×30
		Ti	Nb	W	As	Sn	Pb	N							
NCSHS 11715a-1	Stainless Steel	0.080	0.077	(0.0007)	0.0007	0.0005	(0.00005)	0.027							
NCSHS 11715a-2	Stainless Steel	(0.280)	2.42	0.217	0.0095	0.023	(0.00009)	(0.064)							
NCSHS 11715a-3	Stainless Steel	0.562	0.494	0.311	0.018	0.012	(0.0003)	0.019							
NCSHS 11715a-4	Stainless Steel	0.170	1.04	0.544	0.0066	0.0029	(0.0004)	0.0091							
NCSHS 11715a-5	Stainless Steel	(0.623)	0.173	0.709	0.016	0.014	0.0008	(0.020)							
NCSHS 11715a-6	Stainless Steel	0.742	1.41	0.160	0.0058	0.018	(0.0002)	0.0058							

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	Alt	
NCS HS 11716a-1	High Chromium Cast Iron	1.8	2.72	0.687	0.106	0.046	32.6	0.272	0.314	0.217	0.081	0.201	0.12	0.075	ø33x21
NCS HS 11716a-2	High Chromium Cast Iron	1.99	1.12	1.19	0.051	0.015	10.97	0.319	1.34	0.15	0.04	0.716	0.272	0.051	ø33x21
NCS HS 11716a-3	High Chromium Cast Iron	3.35	1.42	1.25	0.056	0.046	25.83	0.662	0.877	0.447	0.188	0.461	0.068	0.141	ø33x21
NCS HS 11716a-4	High Chromium Cast Iron	2.63	0.572	2.09	0.021	0.05	14.64	1.49	1.64	0.086	0.086	3.51	0.261	0.139	ø33x21
NCS HS 11716a-5	High Chromium Cast Iron	2.27	0.713	1.4	0.186	0.046	18.28	2.16	0.884	0.607	0.028	2.42	0.437	0.044	ø33x21
NCS HS 11716a-6	High Chromium Cast Iron	3.02	1.72	1.76	0.249	0.093	23.76	0.811	0.617	0.479	0.114	1.29	0.128	0.18	ø33x21
		Co	W												
NCS HS 11716a-1	High Chromium Cast Iron	0.037	0.29												
NCS HS 11716a-2	High Chromium Cast Iron	0.018	0.352												
NCS HS 11716a-3	High Chromium Cast Iron	0.357	0.519												
NCS HS 11716a-4	High Chromium Cast Iron	0.124	0.025												
NCS HS 11716a-5	High Chromium Cast Iron	0.031	0.071												
NCS HS 11716a-6	High Chromium Cast Iron	0.206	0.18												
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Co	Pb	
NCS HS 11718a-1	Alloy Cast Iron	1.84	3.52	1.52	0.036	0.060	0.815	0.740	0.085	0.071	0.107	0.082	0.0059	0.0008	ø32X20
NCS HS 11718a-2	Alloy Cast Iron	2.53	2.59	1.04	0.066	0.029	1.49	0.118	1.79	0.153	0.158	0.042	0.0062	0.0008	ø32X20
NCS HS 11718a-3	Alloy Cast Iron	3.70	2.04	0.520	0.270	0.039	0.211	0.288	0.767	0.600	0.059	0.140	0.0027	0.0010	ø32X20
NCS HS 11718a-4	Alloy Cast Iron	3.32	1.47	0.762	0.151	0.017	0.523	0.489	1.03	0.791	0.322	0.160	0.0037	0.0004	ø32X20
NCS HS 11718a-5	Alloy Cast Iron	2.88	1.01	0.331	0.703	0.172	1.98	1.53	0.407	0.301	0.066	0.033	0.011	0.0002	ø32X20
NCS HS 11718a-6	Alloy Cast Iron	4.03	0.570	0.103	0.042	0.019	0.058	1.20	1.26	1.18	0.579	0.057	0.020	0.0004	ø32X20
		As	Alt	W	Nb	Sb	B	Sn							
NCS HS 11718a-1	Alloy Cast Iron	0.012	0.018	0.76	0.114	0.103	0.0078	0.098							
NCS HS 11718a-2	Alloy Cast Iron	0.030	0.098	0.076	0.068	0.0041	0.012	0.034							
NCS HS 11718a-3	Alloy Cast Iron	0.0080	0.113	0.025	0.250	0.084	0.043	0.143							
NCS HS 11718a-4	Alloy Cast Iron	0.013	0.154	0.283	0.5114	0.084	0.071	0.0068							
NCS HS 11718a-5	Alloy Cast Iron	0.016	0.058	0.494	0.045	0.025	0.026	0.069							
NCS HS 11718a-6	Alloy Cast Iron	0.0053	0.172	0.103	0.092	0.198	0.072	0.051							
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Al	V	Sb	
NCS HS 11722-1	Ductile Cast Iron	2.12	3.88	0.26	0.38	0.004	0.040	0.026	0.77	0.21	0.37	0.17	0.031	0.003	ø36X15
NCS HS 11722-2	Ductile Cast Iron	2.46	1.44	1.09	0.074	0.035	0.083	0.025	0.56	1.51	0.143	0.070	0.067	0.052	ø36X15
NCS HS 11722-3	Ductile Cast Iron	3.62	1.85	0.60	0.049	0.012	0.069	0.017	0.38	0.76	0.13	0.094	0.10	0.094	ø36X15
NCS HS 11722-4	Ductile Cast Iron	3.24	2.84	0.46	0.049	0.016	0.093	0.078	0.16	0.24	0.082	0.083	0.11	0.038	ø36X15
NCS HS 11722-5	Ductile Cast Iron	2.70	2.03	0.77	0.16	0.087	0.045	0.023	0.12	1.23	0.20	0.13	0.30	0.12	ø36X15
NCS HS 11722-6	Ductile Cast Iron	4.04	0.88	0.89	0.29	0.14	0.13	0.035	0.079	0.61	0.053	0.044	0.50	0.20	ø36X15
		Sn	Mg	La	Ce										
NCS HS 11722-1	Ductile Cast Iron	0.30	0.07	0.06	0.20										
NCS HS 11722-2	Ductile Cast Iron	0.24	0.041	0.018	0.062										
NCS HS 11722-3	Ductile Cast Iron	0.18	0.060	0.045	0.11										
NCS HS 11722-4	Ductile Cast Iron	0.090	0.033	0.002	0.004										
NCS HS 11722-5	Ductile Cast Iron	0.065	0.004	(0.0005)	(0.003)										
NCS HS 11722-6	Ductile Cast Iron	0.016	0.007	(0.0005)	(0.003)										

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Als	Alt	Tis	
NCS HS 11719-1	Carbon steel	0.963	0.241	0.586	0.022	0.010	0.131	0.206	0.111	0.035	0.017	0.019	0.015	ø38×30
NCS HS 11719-2	Carbon steel	0.042	0.154	0.048	0.105	0.0053	0.247	0.432	0.411	0.207	0.292	0.296	0.154	ø38×30
NCS HS 11719-3	Carbon steel	0.435	0.163	1.14	0.045	0.020	0.086	0.114	0.160	0.099	0.016	0.019	0.023	ø38×30
NCS HS 11719-4	Carbon steel	0.140	0.526	1.30	0.084	0.020	0.198	0.344	0.276	0.153	0.155	0.160	0.128	ø38×30
NCS HS 11719-5	Carbon steel	1.19	0.751	2.20	0.011	0.013	0.439	0.164	0.046	0.0082	0.034	0.036	0.028	ø38×30
NCS HS 11719-6	Carbon steel	0.0060	0.014	0.163	0.0053	0.035	0.021	0.013	0.0032	0.363	0.0016	0.0021	0.0008	ø38×30
NCS HS 11719-7	Carbon steel	0.0048	0.055	0.145	0.0076	0.069	0.061	0.048	0.018	0.362	0.0011	0.0014	0.0012	ø38×30
Tit														
NCS HS 11719-1	Carbon steel	0.016												
NCS HS 11719-2	Carbon steel	0.161												
NCS HS 11719-3	Carbon steel	0.024												
NCS HS 11719-4	Carbon steel	0.132												
NCS HS 11719-5	Carbon steel	0.029												
NCS HS 11719-6	Carbon steel	0.0010												
NCS HS 11719-7	Carbon steel	0.0014												
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Als	Alt	Ti	
NCS HS11717a-1	Micro Alloy Steel	0.0023	0.0054	0.018	0.012	0.0027	0.023	0.0053	0.011	0.0036	0.0069	0.0078	0.0002	D38×30
NCS HS11717a-3	Micro Alloy Steel	0.032	1.55	0.303	0.018	0.067	0.236	0.034	0.563	0.403	0.295	0.298	0.049	D38×30
NCS HS11717a-4	Micro Alloy Steel	0.096	1.09	0.669	0.012	(0.05)	0.102	0.144	0.4	0.316	0.214	0.216	0.202	D38×30
NCS HS11717a-5	Micro Alloy Steel	0.243	0.769	1.04	0.03	0.042	0.106	0.105	0.393	0.248	0.101	0.104	0.178	D38×30
NCS HS11717a-6	Micro Alloy Steel	0.387	0.436	1.47	0.038	0.03	0.409	0.071	0.206	0.167	0.05	0.051	0.124	D38×30
NCS HS11717a-7	Micro Alloy Steel	0.498	0.176	2.1	0.05	0.022	0.612	0.196	0.107	0.075	0.022	0.024	0.088	D38×30
V Co Nb Pb Sn As Sb Bi Ca Bs Bt N														
NCS HS11717a-1	Micro Alloy Steel	-0.0001	0.0015	(<0.0005)	(<0.0001)	0.0002	0.0034	0.00041	(<0.00001)	0.0001#	0.0002	0.0004	0.0016	
NCS HS11717a-2	Micro Alloy Steel	0.011	0.058	0.031	(<0.0001)	0.0073	0.011	0.00031	(<0.00001)	0.0001#	0.0011	0.0012	0.0017	
NCS HS11717a-3	Micro Alloy Steel	0.052	0.099	0.079	(<0.0001)	0.016	0.019	0.00041	(<0.00001)	0.0001#	0.0018	0.002	0.0032	
NCS HS11717a-4	Micro Alloy Steel	0.098	0.146	0.223	(0.0001)	0.049	0.073	0.00044	(0.00001)	0.0001#	0.0085	0.0096	0.0031	
NCS HS11717a-5	Micro Alloy Steel	0.257	0.296	0.318	(<0.0001)	0.099	0.071	0.00052	(0.00001)	0.0001#	0.0071	0.0074	0.0048	
NCS HS11717a-6	Micro Alloy Steel	0.201	0.248	0.106	(<0.0001)	0.151	0.045	0.00048	(0.00001)	0.0001#	0.0047	0.0049	0.0049	
NCS HS11717a-7	Micro Alloy Steel	0.147	0.198	0.153	(<0.0001)	0.197	0.034	0.0005	(0.00001)	0.0001#	0.0031	0.0033	0.0063	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Als	Alt	Ti	
NCS HS11717b-1	Micro Alloy Steel	0.452	0.161	0.414	0.035	0.017	0.212	0.157	0.432	0.155	0.074	0.075	0.11	D38×30
NCS HS11717b-2	Micro Alloy Steel	0.011	1.6	0.646	0.043	0.0049	0.127	0.208	0.236	0.116	0.3	0.302	0.071	D38×30
NCS HS11717b-3	Micro Alloy Steel	0.028	0.822	1.96	0.049	0.048	0.64	0.306	0.125	0.026	0.279	0.283	0.028	D38×30
NCS HS11717b-4	Micro Alloy Steel	0.0025	0.168	0.176	0.0084	0.0061	0.098	0.071	0.048	0.279	0.012	0.013	0.206	D38×30
NCS HS11717b-5	Micro Alloy Steel	0.078	0.567	1.64	0.015	0.011	0.436	0.257	0.332	0.048	0.029	0.03	0.191	D38×30
NCS HS11717b-6	Micro Alloy Steel	0.236	0.122	1.05	0.021	0.022	0.374	0.104	0.104	0.236	0.061	0.061	0.159	D38×30
NCS HS11717b-7	Micro Alloy Steel	0.369	0.065	0.117	0.0075	0.043	0.077	0.029	0.21	0.367	0.238	0.242	0.299	D38×30
V Co Nb Pb Sn As Sb Bi Ca Bs Bt N														
NCS HS11717a-1	Micro Alloy Steel	0.01	0.145	0.125	0.0012	0.039	0.016	0.028	0.0006	0.0001#	0.015	0.016	0.0039	
NCS HS11717a-2	Micro Alloy Steel	0.062	0.21	0.056	0.0005	0.027	0.021	0.016	0.0015	0.0008	0.0019	0.0024	0.004	
NCS HS11717a-3	Micro Alloy Steel	0.149	0.021	0.24	0.0038	0.069	0.0022	0.01			0.0031	0.0033	0.023	
NCS HS11717a-4	Micro Alloy Steel	0.215	0.236	0.038	0.0009	0.0016	0.039	0.0087	0.0007	0.0001#	0.0018	0.002	0.0037	
NCS HS11717a-5	Micro Alloy Steel	0.105	0.042	0.014	0.0051	0.012	0.01	0.0051	0.0003	0.0002	0.011	0.012	0.006	
NCS HS11717a-6	Micro Alloy Steel	0.042	0.087	0.065		0.015	0.012	0.0022	0.0002	0.0004	0.0056	0.0059	0.0063	
NCS HS11717a-7	Micro Alloy Steel	0.326	0.296	0.303	0.0003	0.103	0.098	0.0004			0.0005	0.0006	0.0035	

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Co	Mo	V	B	Ti	
NCS HS 11720-1	High Manganese Alloy	1.96	0.348	22.96	0.188	0.0063	3.01	0.045	0.025	0.0094	0.0095	0.034	0.0021	0.0041	ø30×24
NCS HS 11720-2	High Manganese Alloy	1.61	0.652	10.66	0.052	0.054	0.467	0.328	0.221	0.010	0.118	0.132	0.0038	0.047	ø30×24
NCS HS 11720-3	High Manganese Alloy	1.16	1.16	16.75	0.077	0.055	0.257	0.152	0.143	0.091	0.589	0.53	0.0013	0.03	ø30×24
NCS HS 11720-4	High Manganese Alloy	1.06	1.47	15.04	0.044	0.059	1.45	1.66	0.089	0.0093	0.881	0.567	0.0023	0.013	ø30×24
NCS HS 11720-5	High Manganese Alloy	0.75	1.01	12.2	0.118	0.037	0.68	0.838	0.449	0.007	0.302	0.273	0.0009	0.018	ø30×24
NCS HS 11720-6	High Manganese Alloy	2.38	1.69	5.36	0.029	0.108	0.084	3.43	0.474	0.107	1.51	0.837	0.017	0.218	ø30×24
N															
NCS HS 11720-1	High Manganese Alloy	0.091													
NCS HS 11720-2	High Manganese Alloy	0.054													
NCS HS 11720-3	High Manganese Alloy	0.033													
NCS HS 11720-4	High Manganese Alloy	0.072													
NCS HS 11720-5	High Manganese Alloy	0.026													
NCS HS 11720-6	High Manganese Alloy	0.016													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	Ti	V	Alt	
NCS HS 11721-1	Stainless Steel	0.583	1.1	1.47	0.033	0.032	8.55	1.98	1.86	0.289	0.321	0.463	0.329	0.248	ø38×30
NCS HS 11721-2	Stainless Steel	0.371	0.958	1.17	0.03	0.053	10.08	1.43	0.503	0.276	0.279	0.694	0.298	0.196	ø38×30
NCS HS 11721-3	Stainless Steel	0.189	0.76	0.882	0.019	0.021	2.09	0.638	0.734	0.213	0.217	0.369	0.189	0.091	ø38×30
NCS HS 11721-4	Stainless Steel	0.093	0.506	0.531	0.029	0.026	17.43	0.632	0.089	0.176	0.169	0.288	0.241	0.124	ø38×30
NCS HS 11721-5	Stainless Steel	0.052	0.584	0.675	0.022	0.027	21.49	1.01	0.263	0.126	0.12	0.141	0.142	0.026	ø38×30
NCS HS 11721-6	Stainless Steel	0.0021	0.301	0.366	0.011	0.014	26.29	0.37	1.03	0.074	0.072	0.092	0.099	0.0065	ø38×30
NCS HS 11721-7	Stainless Steel	0.0014	0.117	0.198	0.0064	0.0055	28.38	0.04	1.57	0.0085	0.0045	0.0053	0.016	0.0026	ø38×30
As Sn Pb N Nb															
NCS HS 11721-1	Stainless Steel	0.0027	0.0042	(0.0002)	0.0084	0.55									
NCS HS 11721-2	Stainless Steel	0.0051	0.01	0.00037	0.0081	0.763									
NCS HS 11721-3	Stainless Steel	0.017	0.039	0.0009	0.015	0.387									
NCS HS 11721-4	Stainless Steel	0.022	0.034	(0.0002)	0.023	0.291									
NCS HS 11721-5	Stainless Steel	0.013	0.026	0.0007	0.037	0.137									
NCS HS 11721-6	Stainless Steel	0.024	0.017	0.0007	0.043	0.092									
NCS HS 11721-7	Stainless Steel	0.036	0.051	0.0021	0.01	0.009									
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	W	V	B ₁	B ₂			
NCS HS 13704-1	12CrMoWB	0.068	0.510	1.096	0.012	0.047	0.281	1.46	0.298	0.394	0.0012	0.0010			ø35×25
NCS HS 13704-2	12CrMoWB	0.100	0.290	0.853	0.016	0.071	0.486	1.19	0.438	0.206	0.0021	0.0016			ø35×25
NCS HS 13704-3	12CrMoWB	0.176	0.272	0.585	0.023	0.028	0.775	0.747	0.796	0.251	0.0038	0.0030			ø35×25
NCS HS 13704-4	12CrMoWB	0.193	0.173	0.396	0.039	0.027	1.19	0.472	1.44	0.061	0.0068	0.0058			ø35×25
NCS HS 13704-5	12CrMoWB	0.256	0.055	0.269	0.048	0.010	1.46	0.301	1.94	0.041	0.0090	0.0081			ø35×25
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	Als	Alt	
NCS HS11012	Nodular Cast Iron	3.61	2.43	0.471	0.05	0.018	0.294	0.104	0.227	0.254	0.405	0.042	0.14	0.141	Φ32×28
NCS HS11013	Nodular Cast Iron	3.7	2.29	0.305	0.038	0.004	0.033	0.047	0.001	0.431	0.126	0.003	0.031	0.032	Φ32×28
Ti As Sn Nb B Mg La Ce Sb															
NCS HS11012	Nodular Cast Iron	0.093	0.0046	0.1	0.014	0.061	0.037	0.0087	0.039	0.06					
NCS HS11013	Nodular Cast Iron	0.033	0.0019	0.024	(0.0006)	0.0015	0.049	0.012	0.046	0.02					

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	V	Ni	Cu	Mo	Als	Alt	
NCS HS11725-1	Oriented Silicon Steel	0.0084	2.06	0.066	0.0091	0.0034	0.047	0.0063	0.044	0.041	0.0045	0.0056	0.0061	ø38×20
NCS HS11725-2	Oriented Silicon Steel	0.032	2.91	0.101	0.011	0.018	0.056	0.028	0.049	0.049	0.015	0.019	0.02	ø38×20
NCS HS11725-3	Oriented Silicon Steel	0.053	3.27	0.202	0.015	0.0079	0.067	0.0048	0.084	0.189	0.0057	0.021	0.023	ø38×20
NCS HS11725-4	Oriented Silicon Steel	0.059	3.3	0.158	0.021	0.033	0.054	0.016	0.093	0.109	0.027	0.03	0.031	ø38×20
NCS HS11725-5	Oriented Silicon Steel	0.1	4.12	0.316	0.03	0.045	0.097	0.037	0.105	0.305	0.066	0.046	0.047	ø38×20
		Ti	Nb	B	Sn	Zr	Sb	As	Pb					
NCS HS11725-1	Oriented Silicon Steel	0.0023	0.0053	0.0005	0.0049	0.0002*	0.0004*	0.0035	<0.0001#					
NCS HS11725-2	Oriented Silicon Steel	0.0044	0.027	0.0011	0.0084	0.0032	0.0004*	0.0054	<0.0001#					
NCS HS11725-3	Oriented Silicon Steel	0.0036	0.0054	0.0008	0.066	0.0007	0.0004*	0.0031	<0.0001#					
NCS HS11725-4	Oriented Silicon Steel	0.01	0.016	0.0015	0.029	0.0032	0.0004*	0.01	<0.0001#					
NCS HS11725-5	Oriented Silicon Steel	0.012	0.036	0.0024	0.079	0.014	0.0004*	0.034	<0.0001#					
Number	Name	C	Si	Mn	P	Chemical Composition(%)								Unit Size (mm)
						S	Cr	V	Ni	Cu	Als	Ti	Nb	
NCS HS11726-1	Non-oriented Silicon Steel	0.0094	0.375	0.302	0.073	0.0081	0.024	0.0021	0.0098	0.012	0.24	0.0059	0.0008	ø38×30
NCS HS11726-2	Non-oriented Silicon Steel	0.011	1.83	0.259	0.011	0.011	0.085	0.0039	0.191	0.0088	0.498	0.011	0.011	ø38×30
NCS HS11726-3	Non-oriented Silicon Steel	0.02	3.09	0.576	0.013	0.0049	0.047	0.009	0.023	0.024	0.713	0.0076	0.003	ø38×30
NCS HS11726-4	Non-oriented Silicon Steel	0.032	0.85	1.45	0.056	0.018	0.067	0.015	0.023	0.024	0.0004#	0.0048	0.004	ø38×30
NCS HS11726-5	Non-oriented Silicon Steel	0.038	1.42	0.393	0.015	0.022	0.08	0.021	0.015	0.034	0.037	0.0032	0.0059	ø38×30
NCS HS11726-6	Non-oriented Silicon Steel	0.035	2.24	2.01	0.014	0.014	0.059	0.024	0.01	0.025	1.18	0.0098	0.013	ø38×30
NCS HS11726-7	Non-oriented Silicon Steel	0.061	0.074	0.876	0.145	0.012	0.101	0.013	0.016	0.029	1.51	0.023	0.011	ø38×30
NCS HS11726-8	Non-oriented Silicon Steel	0.004	0.205	0.225	0.176	0.0065	0.134	0.011	0.0053	0.044	0.089	0.028	0.004	ø38×30
		B	Sn	Zr	Sb									
NCS HS11726-1	Non-oriented Silicon Steel	0.0006	0.0015	0.001	0.0013									
NCS HS11726-2	Non-oriented Silicon Steel	0.0008	0.0028	0.002	0.0004*									
NCS HS11726-3	Non-oriented Silicon Steel	0.0015	0.0088	0.015	0.0024									
NCS HS11726-4	Non-oriented Silicon Steel	0.0031	0.011	0.001	0.0046									
NCS HS11726-5	Non-oriented Silicon Steel	0.002	0.02	0.0019	0.0064									
NCS HS11726-6	Non-oriented Silicon Steel	0.0065	0.03	0.019	0.0004*									
NCS HS11726-7	Non-oriented Silicon Steel	0.009	0.05	0.002	0.011									
NCS HS11726-8	Non-oriented Silicon Steel	0.0027	0.0042	0.0027	0.0003*									
Number	Name	C	Si	Mn	P	Chemical Composition(%)								Unit Size (mm)
						S	Ti	Nb	V	Ni	Cr	Cu	As	
NCS HS14730	Wear resistant Steel	0.134	1.235	1.717	0.008	0.00066	0.019	0.0012	0.0017	0.011	0.028	0.023	0.0036	ø40×40
NCS HS14731	Silicon Steel	0.0036	1.411	0.583	0.013	0.0028	0.0022	0.0005	0.0008	0.0068	0.029	0.012	0.0033	ø40×40
NCS HS14732	High strength steel	0.09	0.139	1.853	0.0139	0.0017	0.127	0.0567	0.0052	0.0162	0.0389	0.053	0.0053	ø40×40
NCS HS14733	Silicon Steel	0.057	3.165	0.0947	0.023	0.0066	0.0024	0.00023	0.003	0.009	0.113	0.0158	0.0031	ø40×40
NCS HS14734	Silicon Steel	0.037	3.17	0.201	0.0091	0.0073	0.0025	0.0006	0.0008	0.0079	0.0168	0.491	0.0037	ø40×40
		Alt	Als	N	Mo	Sn	B	Sb	Pb	Ca*				
NCS HS14730	Wear resistant Steel	0.455	0.446	0.0048	0.0069	0.0015	0.0014*	0.0012*	0.0005*					
NCS HS14731	Silicon Steel	0.257	0.249	0.0015*	0.0039	0.0007	0.0005	0.0524*		0.0002*				
NCS HS14732	High strength steel	0.0352	0.0337	0.0045	0.164	0.004	0.00025*		0.0012*		0.0005*			
NCS HS14733	Silicon Steel	0.0274	0.0264	0.0087	0.0038	0.051	0.0005	0.0037	5	0.0001				
NCS HS14734	Silicon Steel	0.017	0.016	0.0088	0.0018	0.003	0.0009*		0.0006					

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Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo				
NCS HS 16704-1	38CrMoAl	0.196	0.447	0.543	0.0106	0.0101	2.22	0.460	0.082	0.383	0.476			ø32×48	
NCS HS 16704-2	38CrMoAl	0.141	0.581	0.790	0.0102	0.0100	1.86	0.103	0.054	0.508	0.341			ø32×48	
NCS HS 16704-3	38CrMoAl	0.370	0.239	0.469	0.0166	0.0492	1.58	0.197	0.463	0.790	0.148			ø32×48	
NCS HS 16704-4	38CrMoAl	0.706	0.224	0.196	0.0397	0.0375	1.97	0.479	0.07	0.247	0.391			ø32×48	
NCS HS 16704-5	38CrMoAl	0.238	0.364	0.546	0.0268	0.0104	1.16	0.067	0.295	0.962	0.092			ø32×48	
NCS HS 16704-6	38CrMoAl	0.532	0.310	0.421	0.0379	0.0093	0.99	0.045	0.120	1.38	0.044			ø32×48	
Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	V	Ti	As	Mo			
NCS HS 19701-1	Pig Iron	2.45	0.099	0.072	0.011	0.019	0.513	0.183	0.009	0.006	0.005			ø30×30	
NCS HS 19701-2	Pig Iron	2.98	0.937	0.329	0.033	0.038	0.08	0.194	0.044	0.216	0.024			ø30×30	
NCS HS 19701-3	Pig Iron	3.29	0.689	1.22	0.044	0.056	0.03	0.045	0.071	0.043	0.009			ø30×30	
NCS HS 19701-4	Pig Iron	3.7	0.45	0.857	0.087	0.076	0.118	0.032	0.158	0.03	0.002	0.031		ø30×30	
NCS HS 19701-5	Pig Iron	3.67	0.18	0.596	0.072	0.117	0.17	0.504	0.335	0.066	0.002	0.68		ø30×30	
NCS HS 19701-6	Pig Iron	3.93	0.99	1.46	0.168	0.124	0.388	0.094	0.506	0.105	0.002	0.112		ø30×30	
NCS HS 19701-7	Pig Iron	4.13	1.85	2.06	0.306	0.111	0.157	0.026	0.822	0.403	0.043			ø30×30	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	Co	
NCS HS 23703-1	Cr ₁₃	0.040	0.223	0.130	0.0062	0.0028	14.26	0.500	0.056	0.059	0.041	0.058	0.064	0.016	ø33×33
NCS HS 23703-2	Cr ₁₃	0.245	0.420	0.337	0.0103	0.032	11.03	0.393	0.284	0.151	0.079	0.27	0.353	0.054	ø33×33
NCS HS 23703-3	Cr ₁₃	0.159	0.568	0.495	0.0165	0.017	12.52	0.207	0.171	0.089	0.091	0.19	0.157	0.036	ø33×33
NCS HS 23703-4	Cr ₁₃	0.340	0.772	0.740	0.0262	0.0054	9.37	0.461	0.374	0.201	0.371	0.38	0.244	0.078	ø33×33
NCS HS 23703-5	Cr ₁₃	0.472	0.487	0.983	0.043	0.041	7.84	0.771	0.522	0.287	0.187	0.50	0.487	0.116	ø33×33
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo				
NCS HS 23707a-1	GSiMnMoV	1.2	0.901	0.201	0.0036	0.048	0.108	0.454	0.514	0.045	0.086				ø35×35
NCS HS 23707a-2	GSiMnMoV	0.471	0.318	0.922	0.03	0.031	0.351	0.146	0.113	0.151	0.452				ø35×35
NCS HS 23707a-3	GSiMnMoV	0.176	0.083	1.25	0.043	0.011	0.45	0.107	0.086	0.434	0.563				ø35×35
NCS HS 23707a-4	GSiMnMoV	0.936	0.747	0.511	0.012	0.0094	0.24	0.356	0.274	0.335	0.252				ø35×35
NCS HS 23707a-5	GSiMnMoV	0.663	0.548	0.684	0.021	0.05	0.093	0.303	0.438	0.243	0.354				ø35×35
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co	
NCS HS 23716-1	Heat Die Steel	0.763	0.36	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.27	0.0069	1.45	0.028	ø35×30
NCS HS 23716-2	Heat Die Steel	1.11	0.29	0.104	0.038	0.005	5.6	0.407	0.075	0.5	0.05	0.0051	2	0.009	ø35×30
NCS HS 23716-3	Heat Die Steel	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.8	0.077	0.5	0.105	ø35×30
NCS HS 23716-4	Heat Die Steel	0.599	0.08	0.432	0.021	0.034	3.84	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30
NCS HS 23716-5	Heat Die Steel	0.088	1.09	1.67	0.005	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.08	1.98	ø35×30
NCS HS 23716-6	Heat Die Steel	0.2	0.65	1.21	0.01	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.2	1.49	ø35×30
		Sn	Pb												
NCS HS 23716-1	Heat Die Steel	0.0075	0.011												
NCS HS 23716-2	Heat Die Steel	0.007	0.074												
NCS HS 23716-3	Heat Die Steel	0.0076	0.0087												
NCS HS 23716-4	Heat Die Steel	0.02	(0.0001)												
NCS HS 23716-5	Heat Die Steel	0.052	0.0053												
NCS HS 23716-6	Heat Die Steel	0.032	(0.0001)												

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	W	Co		
NCS HS 23717-1	Cold Die Steel	2.19	0.37	0.369	0.015	0.001	11.7	0.096	0.085	0.022	0.04	0.61	0.014	ø35×30	
NCS HS 23717-2	Cold Die Steel	1.57	0.29	0.333	0.019	0.014	11.5	0.194	0.172	0.574	0.64	0.47	0.064	ø35×30	
NCS HS 23717-3	Cold Die Steel	1.31	0.38	0.473	0.0072	0.023	10.1	0.094	0.131	0.854	0.48	0.69	0.035	ø35×30	
NCS HS 23717-4	Cold Die Steel	0.869	0.05	0.044	0.044	0.003	14.2	0.436	0.364	0.082	1.07	0.07	0.166	ø35×30	
NCS HS 23717-5	Cold Die Steel	1.88	0.18	0.16	0.03	0.005	12.7	0.297	0.228	0.333	0.82	0.31	0.096	ø35×30	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (mm)	
						S	Cr	Ni	Cu	Mo	V	Ti	Alt		
NCS HS 23718-1	Middle-Low alloy	0.496	0.25	0.732	0.051	0.014	0.81	1.47	0.439	0.504	0.52	0.325	0.02	ø35×30	
NCS HS 23718-2	Middle-Low alloy	0.115	0.79	2.02	0.06	0.006	1.78	0.494	0.082	0.079	0.12	0.105	0.06	ø35×30	
NCS HS 23718-3	Middle-Low alloy	0.201	0.7	1.24	0.015	0.049	0.4	1.02	0.299	0.251	0.22	0.232	0.661	ø35×30	
NCS HS 23718-4	Middle-Low alloy	0.356	0.42	1.68	0.0042	0.089	1.35	0.238	0.144	0.107	0.34	0.402	0.142	ø35×30	
NCS HS 23718-5	Middle-Low alloy	0.657	0.15	0.463	0.033	0.025	2.29	0.117	0.07	0.974	0.06	0.497	0.27	ø35×30	
NCS HS 23718-6	Middle-Low alloy	0.048	0.07	0.102	0.018	0.003	0.1	2	0.561	0.686	0.03	0.011	0.569	ø35×30	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (mm)	
						S	Cr	Ni	Cu	Mo	V	Alt	W	Co	
NCS HS 23720-1	Middle-Low alloy	0.763	0.359	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.268	0.0069	1.45	0.028	ø35×30
NCS HS 23720-2	Middle-Low alloy	1.11	0.286	0.104	0.038	0.0047	5.60	0.407	0.075	0.50	0.053	0.0051	2.00	0.0086	ø35×30
NCS HS 23720-3	Middle-Low alloy	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.80	0.077	0.496	0.105	ø35×30
NCS HS 23720-4	Middle-Low alloy	0.599	0.080	0.432	0.021	0.034	3.94	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30
NCS HS 23720-5	Middle-Low alloy	0.088	1.09	1.67	0.0050	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.082	1.98	ø35×30
NCS HS 23720-6	Middle-Low alloy	0.200	0.649	1.21	0.010	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.204	1.49	ø35×30
		Sn	Pb												
NCS HS 23720-1	Middle-Low alloy	0.0075	0.011												
NCS HS 23720-2	Middle-Low alloy	0.0070	0.074												
NCS HS 23720-3	Middle-Low alloy	0.0076	0.0087												
NCS HS 23720-4	Middle-Low alloy	0.020	(0.0001)												
NCS HS 23720-5	Middle-Low alloy	0.052	0.0053												
NCS HS 23720-6	Middle-Low alloy	0.032	(0.0001)												

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Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Nb	Alt		
NCS HS28702a-1	Nodular Cast Iron	2.43	3.08	0.178	0.031	0.0037	1.98	3.7	1.35	2.06	0.45	0.057	0.054	0.007	ø30×30	
NCS HS28702a-2	Nodular Cast Iron	2.86	1.67	0.384	0.042	0.0068	1.54	0.985	0.987	1.55	0.396	0.095	0.035	0.016	ø30×30	
NCS HS28702a-3	Nodular Cast Iron	3.18	2.17	0.783	0.119	0.025	1.01	2.17	0.815	1	0.3	0.074	0.02	0.041	ø30×30	
NCS HS28702a-4	Nodular Cast Iron	3.59	1.25	1.17	0.076	0.028	0.755	0.705	0.525	0.665	0.234	0.044	0.021	0.141	ø30×30	
NCS HS28702a-5	Nodular Cast Iron	3.99	0.601	1.39	0.211	0.045	0.415	0.201	0.306	0.355	0.098	0.032	0.012	0.027	ø30×30	
NCS HS28702a-6	Nodular Cast Iron	3.48	0.275	1.69	0.554	0.052	0.164	4.18	0.068	0.076	0.055	0.031	0.0041	0.0051	ø30×30	
		Mg	Ce	B	As	Sb	Pb	La								
NCS HS28702a-1	Nodular Cast Iron	0.11		0.171	0.051	0.0073	0.002									
NCS HS28702a-2	Nodular Cast Iron	0.04	0.088	0.114	0.033	0.0062	0.0017	0.011								
NCS HS28702a-3	Nodular Cast Iron	0.033	0.0089	0.053	0.037	0.0052	0.0048	0.0017								
NCS HS28702a-4	Nodular Cast Iron	0.017	0.044	0.028	0.024	0.015	0.011	0.0074								
NCS HS28702a-5	Nodular Cast Iron	0.011	0.017	0.012	0.032	0.0071	0.0043	0.0024								
NCS HS28702a-6	Nodular Cast Iron	0.0039		0.0077	0.081	0.0022	0.0006									
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	N	Nb	Ti		
NCS HS 28706-1	Line steel	0.055	0.29	1.81	0.011	0.0024	0.283	0.201	0.116	0.0043	0.205	0.0053	0.103	0.022	ø40×40	
NCS HS 28706-2	Line steel	0.058	0.202	1.41	0.0072	0.0063	0.049	0.012	0.0014	0.042	0.013	0.004	0.05	0.016	ø40×40	
NCS HS 28706-3	Line steel	0.083	0.194	0.559	0.01	0.007	0.024	0.009	0.002	0.0009	0.02	0.0053	0.011	0.003	ø40×40	
NCS HS 28706-4	Line steel	0.086	0.246	1.2	0.011	0.006	0.022	0.008	0.0012	0.0014	0.015	0.0059	0.022	0.01	ø40×40	
NCS HS 28706-5	Line steel	0.105	0.325	1.31	0.0087	0.0041	0.023	0.0089	0.0013	0.038	0.016	0.0067	0.035	0.02	ø40×40	
NCS HS 28706-6	Line steel	0.108	0.279	1.23	0.013	0.006	0.026	0.0061	0.001	0.0012	0.01	0.0074	0.023	0.01	ø40×40	
		As	Alt	Als	Ca											
NCS HS 28706-1	Line steel	0.004	0.027	0.026	0.0009											
NCS HS 28706-2	Line steel	0.0032	0.028	0.026	0.0012											
NCS HS 28706-3	Line steel	0.0034	0.023	0.021	0.0017											
NCS HS 28706-4	Line steel	0.0043	0.016	0.015	0.0035											
NCS HS 28706-5	Line steel	0.0033	0.023	0.022	0.002											
NCS HS 28706-6	Line steel	0.0044	0.023	0.022	0.0013											
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al						
NCS HS 39701-1	Carbon Steel	0.108	0.029	1.15	0.0038	0.070	0.379	0.252	0.276	0.073					ø33×35	
NCS HS 39701-2	Carbon Steel	0.172	0.103	1.07	0.014	0.012	0.241	0.210	0.14						ø33×35	
NCS HS 39701-3	Carbon Steel	0.29	0.156	0.62	0.032	0.026	0.153	0.181	0.193						ø33×35	
NCS HS 39701-4	Carbon Steel	0.30	0.247	0.86	0.023	0.040	0.092	0.065	0.097						ø33×35	
NCS HS 39701-5	Carbon Steel	0.44	0.46	0.41	0.039	0.040	0.275	0.062	0.325	0.40					ø33×35	
NCS HS 39701-6	Carbon Steel	0.58	0.374	0.163	0.054	0.0033	0.34	0.343	0.38	0.463					ø33×35	
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Al _t	B	Sb	Sn		
NCS HS 11759	Carbon Steel	0.101	0.249	0.400	0.043	0.030	0.068	0.066	0.086		0.264	0.0014		0.0024	ø37×45	
NCS HS 11760	Carbon Steel	0.202	0.512	1.34	0.046	0.032	0.078	0.050	0.057		0.092	0.0012		0.0059	ø37×45	
NCS HS 11763	Carbon Steel	0.543	0.361	0.663	0.024	0.024	0.169	0.164	0.118		0.089	0.621		0.0026	ø37×45	
NCS HS 11764	Carbon Steel	0.235	0.318	0.632	0.037	0.028	0.076	0.103	0.106		0.071		0.14	0.024	ø37×40	
NCS HS 11774	GCr ₁₅	1.02	0.250	0.340	0.015	0.023	1.48	0.036	0.037	0.022					ø36×50	
		As	Pb													
NCS HS 11759	Carbon Steel	0.0058														
NCS HS 11760	Carbon Steel	0.012														
NCS HS 11763	Carbon Steel	0.012														
NCS HS 11764	Carbon Steel	0.15	0.0011													

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Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	V	As	Sn	
NCS HS 11775	Alloy Steel	0.084	0.787	1.62	0.029	0.002	25.53	20.72							ø35×20
NCS HS 11782	Gray Iron	3.21	1.64	1.09	0.088	0.035	0.061	0.014	0.042	0.0048	0.027	0.0079	0.0065		ø31×28
NCS HS 11784	High phosphorus Cast Iron	3.3	2.68	0.528	0.78	0.031	0.812	0.024	0.015	0.142	0.084	0.02		0.0005	ø31×28
NCS HS 11785	High phosphorus Cast Iron	3.19	2.52	0.482	0.79	0.03	0.817	0.031	0.021	0.139	0.076	0.018		0.001	ø31×28
NCS HS 11786	High phosphorus Cast Iron	2.82	2.05	0.768	1.7	0.064	1.98	0.048	0.044	0.251	0.102	0.029		0.0062	ø31×28
NCS HS 11787	High Nickel pig Iron	2.65	2.07	1.08	0.067	0.037	1.98	19.84	0.306	0.0014	0.022	0.0096	0.0075	0.0054	ø31×28
NCS HS 11788	High Nickel pig Iron	2.97	3.29	1.62	0.191	0.01	2.56	17.77	0.51	0.0013	0.043	0.017	0.014	0.0003	ø31×28
NCS HS 11789	High Nickel pig Iron	1.97	2.58	1.08	0.048	0.076	2.51	17.8	6.39	0.062	0.011	0.0093	0.0076	0.014	ø31×28
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	V	As	Sn	
NCS HS 11784	High phosphorus Cast Iron	0.0007	0.0012*	0.0002	0.0083	0.0041	0.0012*								
NCS HS 11785	High phosphorus Cast Iron	0.0005	(0.0009)	0.0002	0.013	0.0049	0.0030*								
NCS HS 11786	High phosphorus Cast Iron	0.0008	0.012	0.0003	0.015	0.0075	0.0094*								
NCS HS 11787	High Nickel pig Iron		0.0006*		0.042*		0.085*	0.0002*	0.0007	(0.0054)					
NCS HS 11788	High Nickel pig Iron		0.0006*		0.031*		(0.0023)	0.0002*	0.0008	(0.0063)					
NCS HS 11789	High Nickel pig Iron		0.0005*	0.015	0.067		0.061	0.0002*	0.0008	(0.0075)					
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	Alt	Ti	Nb	V	
NCS HS 11790	Silicon Steel	0.338	0.841	0.386	0.081	0.0066	0.73	1.52	0.027	0.536	0.538	0.234	0.278	0.035	ø37×40
NCS HS 11791	Silicon Steel	0.095	3.08	1.9	0.0063	0.023	0.032	0.022	0.066	0.34	0.35	0.012	0.0037	(0.0006)	ø37×40
NCS HS 11792	Pipe line steel	0.045	0.183	1.96	0.0075	0.0011	0.363	0.423	0.224	0.043	0.044	0.016	0.097	0.011	ø37×40
NCS HS 11793	Low alloy steel	0.037	0.257	1.59	0.126	0.015	0.452	0.08	0.15			0.239		0.064	ø37×40
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	Alt	Ti	Nb	V	
NCS HS 11790	Silicon Steel	0.809	0.032	0.0011	0.00073	0.013									
NCS HS 11791	Silicon Steel	0.038	0.062	0.0018	0.023	0.023									
NCS HS 11792	Pipe line steel	0.324	0.0015				0.002	(0.0003)							
NCS HS 11793	Low alloy steel			0.015	0.042										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	V	Ti	Mo					
NCS HS 13750	Low Alloy Steel	0.131	0.175	0.523	0.0126	0.0257	0.970			0.172					ø38×38
NCS HS 13752	Low Alloy Steel	0.517	0.204	0.986	0.0261	0.0108	0.685	0.094		0.258					ø38×38
NCS HS 13753	Low Alloy Steel	0.592	0.464	0.481	0.040	0.0397	0.752	0.122	0.0084	0.302					ø38×38
NCS HS 13755	Low Alloy Steel	0.420	0.301	0.924	0.024	0.020	0.960			0.187					ø38×38
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ti	Mo						
NCS HS 13758	Low Alloy Steel	0.165	0.502	1.451	0.0176	0.0221	0.34	0.173	0.143						ø38×35
NCS HS 13759	Low Alloy Steel	0.199	0.410	1.302	0.0171	0.022	0.384		0.161						ø38×35
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Al _c	Cu	Al _c	As	Ti	Mo		
NCS HS 18741	35CrMo	0.355	0.273	0.57	0.01	0.033	0.93	0.029	0.075	0.035	0.057	0.011	0.154		ø37×30
NCS HS 18742	16Mn	0.152	0.305	1.26	0.012	0.023	0.121		0.077		0.034	0.018			ø37×30
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Fe	Mo	V	Cu	W	Co	Nb	
NCS HS 11795	Nickel-based superalloy	0.029	0.038	0.012	0.002	0.001	18.89	18.75	3.1	0.047	-0.002	0.01	0.045	5.03	D38×35
NCS HS 11796	Nickel-based superalloy	0.044	0.031	0.0013	0.0008	(0.0008)	20.45	0.11		0.0069	0.0027		0.0014	1.52	D38×35
NCS HS 11797	Ferro-Nickel-based superalloy	0.043	0.026	0.051	0.0062	0.0033	11.27			0.0045	0.0042	0.0013	0.0021	0.0016	D38×35
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Fe	Mo	V	Cu	W	Co	Nb	
NCS HS 11795	Nickel-based superalloy	0.55	0.56	(0.0001)	1.02	0.0045									
NCS HS 11796	Nickel-based superalloy	0.98	1.01		2.86	0.0058	0.031								
NCS HS 11797	Ferro-Nickel-based superalloy	0.51	0.52	(0.0003)	2.91	0.012		23.04	0.0015						
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Alt	Als		
NCS HS 11766c	Alloy Structure Steel	0.213	0.235	0.932	0.0079	0.0025	1.15	0.014	0.011	0.0045	0.07				38×40
NCS HS 11766d	Alloy Structure Steel	0.211	0.232	0.929	0.0083	0.0029	1.14	0.013	0.01	0.0045	0.069	0.017	0.016		37×40

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Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Al	
NCS HS 11798	Spheroidal Graphite Cast Iron	3.78	2.73	0.606	0.053	0.02	0.7	0.856	0.526	0.018	0.117	0.359	0.042	31×30
NCS HS 11799a	Spheroidal Graphite Cast Iron	3.95	2.3	0.511	0.055	0.014	0.251	0.141	0.487	0.312	0.117	0.474	0.014	31×30
		Sb	Sn	Mg	La	Ce								
NCS HS 11798	Spheroidal Graphite Cast Iron	0.025	0.032	(0.034)	0.0042	0.0097								
NCS HS 11799a	Spheroidal Graphite Cast Iron		0.055	0.032	0.0064	0.012								
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Ni	Cr	W	Cu	Mo	V	N	
NCS HS18743	M2Al(W ₆ Mo ₅ Cr ₄ V ₂ Al)	1.05	0.44	0.3	0.023	0.0014	0.18	4.31	6.18	0.17	5.1	1.87		D35×35
NCS HS18744	4Cr ₄ Mn ₁₈	0.42	0.48	17.1	0.016	0.042	0.06	4.03		0.1				D35×35
NCS HS18745	2Cr ₁₃	0.189	0.452	0.348	0.021	0.0034	0.132	12.58		0.079				D35×35
NCS HS18746	214N	0.533	0.222	9.34	0.025	0.0059	3.92	21.14		0.159	0.057	0.066	0.42	D35×35
NCS HS18747	318	0.254	1.31	0.547	0.023	0.0027	6.6	16.95		0.095	2.13	0.077	0.144	D35×35
NCS HS18748	0Cr ₁₇	0.027	0.617	0.408	0.031	0.0056	0.415	16.51		0.072				D35×35
NCS HS18749	4Cr ₉ Si ₂	0.466	2.08	0.612	0.036	0.026	0.543	8.64		0.112	0.055	0.033		D35×35
NCS HS18750	4Cr ₁₀ Si ₂ Mo	0.355	2.56	0.425	0.035	0.023	0.346	10.53		0.128	0.798	0.051		D35×35
NCS HS18751	3Cr ₂ W ₈ V	0.4	0.25	0.25	0.017	0.016	0.46	2.72	8.14	0.05				D35×35
NCS HS18752	H ₁₃ (4Cr ₅ MoSiV ₁)	0.34	1.17	0.4	0.017	0.01	0.15	5.3		0.08	1.18	1.04		D35×35
		Co	As	Al										
NCS HS18743	M2Al(W ₆ Mo ₅ Cr ₄ V ₂ Al)	0.28		0.96										
NCS HS18744	4Cr ₄ Mn ₁₈		0.014											
NCS HS18745	2Cr ₁₃		0.014											
NCS HS18746	214N	0.08												
NCS HS18747	318	0.044												
NCS HS18748	0Cr ₁₇		0.008											
NCS HS18749	4Cr ₉ Si ₂		0.017											
NCS HS18750	4Cr ₁₀ Si ₂ Mo		0.017											
NCS HS18751	3Cr ₂ W ₈ V													
NCS HS18752	H ₁₃ (4Cr ₅ MoSiV ₁)		0.029	0.06										
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Alt	Als	N	V	Ti	Mo	
NCS HS 20741	1Cr ₁₃ Mo	0.125	0.0045	0.957	0.017	0.0045	12.91						0.41	ø35×40
NCS HS 20743	0Cr ₁₁ Ti	0.015	0.97	0.949	0.038	0.0055	11.88	0.022	0.021	0.0155		0.411		ø35×40
NCS HS 20745	10PCuRE	0.068	0.33	0.813	0.1	0.024					0.022			ø35×40
NCS HS 20747	09MnNb	0.083	0.472	0.967	0.02	0.015								ø35×40
		Cu	Ce	Nb	La									
NCS HS 20745	10PCuRE	0.297	0.014		0.0076									
NCS HS 20747	09MnNb			0.052										
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Cu	Pb	Zn	P	Fe	Sn	Sb	Bi	Mn	Ni	Si		
NCS HS 28749	Lead Brass	57.09	1.74	41.11	<0.0015	0.017	0.017	<0.0015	<0.0010	0.0015	0.013	0.0012		ø38×30
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	Nb	Co	
NCS HS41767	Stainless Steel	0.031	0.73	1.69	0.026	0.011	16.77	6.62	0.316	0.319	0.002	0.003	0.031	Φ38×38
		V	Al	B	Pb	Sn	As	Ca	N					
NCS HS41767	Stainless Steel	0.00326	0.0029	0.0021	0.0001	0.002	0.0071	0.0005	0.049					

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Number	Name	Chemical Composition(Percent)											Unit Size (mm)	
		C	S	Si	Mn	P	Cr	Ni	Mo	Cu	V	Ti		
NCS HS 37701-1	High Chromium Cast Iron	3.43	0.010	0.055	1.59	0.161	1.35	1.55	3.11	0.193	1.01	0.008	ø30×25	
NCS HS 37701-2	High Chromium Cast Iron	3.00	0.016	0.56	1.42	0.133	7.23	1.43	2.48	0.324	0.88	0.015	ø30×25	
NCS HS 37701-3	High Chromium Cast Iron	2.73	0.036	0.99	1.09	0.105	12.97	1.20	2.08	0.451	0.66	0.045	ø30×25	
NCS HS 37701-4	High Chromium Cast Iron	2.31	0.046	1.40	0.725	0.071	17.60	0.914	1.44	0.739	0.46	0.084	ø30×25	
NCS HS 37701-5	High Chromium Cast Iron	1.83	0.091	1.80	0.466	0.043	23.40	0.517	0.739	0.904	0.26	0.068	ø30×25	
NCS HS 37701-6	High Chromium Cast Iron	1.45	0.123	2.38	0.254	0.024	28.96	0.216	0.213	1.15	0.13	0.084	ø30×25	
Number	Name	Chemical Composition(Percent)										Unit Size (mm)		
		C	Si	Mn	P	S	Cu	Alt	Als	N(ppm)				
NCS HS 18753	Low Carbon low sulfur Steel	0.01	1.35	0.269	0.024	0.0046	0.017	0.283	0.28	27.9*			D35x40	
NCS HS 18754	Low Carbon low sulfur Steel	0.0037	0.99	0.256	0.086	0.0054	0.015	0.248	0.244	27.2*			D35x40	
NCS HS 18755	Low Carbon low sulfur Steel	0.002	0.88	0.297	0.085	0.0055	0.015	0.259	0.258	16.3*			D35x40	
NCS HS 18756	Low Carbon low sulfur Steel	0.0124	0.008	0.202	0.013	0.0091	0.017	0.024	0.022				D35x40	
NCS HS 18757	Low Carbon low sulfur Steel	0.0054	0.009	0.116	0.014	0.0095	0.023	0.043	0.04				D35x40	
Number	Name	Chemical Composition(Percent)											Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Al	Co	Ti	Mo		Cu
NCS HS 31741	3Cr ₁₃	0.298	0.277	0.330	0.026	0.019	12.75	0.271		0.035		0.067	0.109	ø38×30
NCS HS 31742	1Cr ₁₈ Ni ₉ Ti	0.096	0.566	1.27	0.030	0.005	17.25	8.22	0.098	0.112	0.555	0.132	0.307	ø38×30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	As		Sn
NCS HS 41743	Stainless steel	0.047	0.542	0.691	0.035	0.0044	15.85	3.53	0.195	0.202	3.37	0.0097	0.013	ø38×38
NCS HS 41744	Stainless steel	0.137	0.297	7.98	0.045	0.0091	16.01	4.12	0.052		0.123	0.0043	0.0046	ø38×38
		V	Co	W	N	Co	W	N						
NCS HS 41743	Stainless steel	0.067	0.063	0.058	0.014	0.063	0.058	0.014						
NCS HS 41744	Stainless steel	0.049	0.078	0.0055	0.049	0.078	0.0055	0.049						
Number	Name	Chemical Composition(Percent)											Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni						
NCS HS 93702-1	Alloy steel	0.053	1.37	5.02	0.055	0.0027	17.51	2.44						ø38×30
NCS HS 93702-2	Alloy steel	0.18	1.04	6.60	0.038	0.010	15.26	3.61						ø38×30
NCS HS 93702-3	Alloy steel	0.28	0.94	8.37	0.024	0.016	12.67	4.56						ø38×30
NCS HS 93702-4	Alloy steel	0.35	0.74	11.00	0.018	0.025	10.72	5.67						ø38×30
NCS HS 93702-5	Alloy steel	0.42	0.40	12.93	0.011	0.033	8.22	6.68						ø38×30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti		Alt
NCS HS 28741	Stainless Steel	0.039	0.425	1.07	0.037	0.016	18.31	8.19	0.399	0.027	0.106	0.002*		ø38×35
NCS HS 28742	Stainless Steel	0.021	0.414	0.94	0.034	0.0028	18.2	8.11	0.043	0.025	0.089	0.006		ø38×35
NCS HS 28743	Stainless Steel	0.11	0.78	0.841	0.024	0.0082	23.71	18.02	0.089	0.115	0.077	0.003*	0.0056	ø38×35
NCS HS 28745	Stainless Steel	0.018	0.317	1.17	0.042	0.0057	16.61	10.34	0.334	2.05	0.07	0.002*		ø38×35
NCS HS 28746	Stainless Steel	0.021	0.51	1.87	0.031	0.0009	17.19	8.24	0.34	0.069	0.096	0.184	0.086	ø38×35
NCS HS 28747	Stainless Steel	0.132	0.502	0.453	0.027	0.0068	16.24	1.79	0.126	0.153	0.075	0.002*		ø38×35
NCS HS 28748	Stainless Steel	0.045	0.644	0.742	0.028	0.013	15.88	3.85	3.23	0.259	0.076	0.002*		ø38×35
		Co	Nb	Sn	Pb	N	As							
NCS HS 28741	Stainless Steel	0.208		0.0051	0.0001	0.069	0.0035							
NCS HS 28742	Stainless Steel	0.216		0.0001*	0.0001	0.059	0.0025							
NCS HS 28743	Stainless Steel	0.102	0.016	0.0025	0.0004	0.057	0.0042							
NCS HS 28745	Stainless Steel	0.185		0.0073	0.0001	0.07	0.0055							
NCS HS 28746	Stainless Steel	0.191		0.0065	0.0002	0.011	0.0032							
NCS HS 28747	Stainless Steel	0.051		0.0057	0.0001	0.03	0.0063							
NCS HS 28748	Stainless Steel	0.119	0.23	0.0063	0.0001	0.03	0.0047							

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Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	S	Mn	Si	P	Ni	Cr	Fe	Mo	Ti	Al	Cu	V	
NCS HS 41745	Nickel-based superalloy	0.043	0.0006	0.124	0.071	0.0023	63.72	20.69	3.50	8.37	0.011	0.016			ø40×30
NCS HS 41747	Corrosion-resisting alloy	0.071	0.0006	0.807	0.36	0.015	32.27	20.72		0.297	0.49	0.299	0.038		ø38×30
NCS HS 41748	Stainless Steel	0.194	0.011	0.62	0.54	0.016	0.077	12.70		0.010			0.008	0.048	ø38×38
NCS HS 41749	Stainless Steel	0.21	0.012	0.39	0.56	0.023	1.52	12.27					1.15	0.074	ø38×38
NCS HS 41750	Stainless Steel	0.075	0.012	1.43	0.33	0.031	6.35	16.31		0.107		0.009	0.276	0.064	ø38×38
NCS HS 41751a	Stainless Steel	0.075	0.16	1.7	0.71	0.035	8.07	17.41		0.33			0.26	0.068	ø38×38
NCS HS 41752	Stainless Steel	0.97	0.0016	0.46	0.48	0.023	0.192	17.61		0.057			0.082	0.088	ø38×38
NCS HS 41753a	Stainless Steel	0.012	0.013	0.973	0.48	0.021	24.28	19.16			0.004		1.26	0.075	ø38×38
		Ta**	Co	Nb	Co*	Mo	N	Ti*	Al*	W					
NCS HS 41745	Nickel-based superalloy	0.001		3.19	0.011										
NCS HS 41747	Corrosion-resisting alloy		0.050												
NCS HS 41749	Stainless Steel					0.158									
NCS HS 41750	Stainless Steel						0.058	0.001							
NCS HS 41751a	Stainless Steel		0.13				0.077								
NCS HS 41752	Stainless Steel								0.032						
NCS HS 41753a	Stainless Steel		0.18	0.812		4.25	0.041	0.004		0.058					
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	S	Mn	Si	P	Cr	Ni	Cu	Mo	Al	V	Ti	Mo	
NCS HS 41754	Alloy Structure Steel	0.197	0.0055	1.01	0.28	0.008	1.33	0.060	0.010	0.26	0.017	0.005	0.003		ø38×32
NCS HS 41755	Alloy Structure Steel	0.23	0.004	0.27	0.044	0.0046	1.64	3.40						0.37	ø38×38
NCS HS 41756	Alloy Structure Steel	0.205	0.002	0.60	0.25	0.011	0.93	0.012	0.008	0.17		0.004	0.004		ø38×32
NCS HS 41757	Easy cutting Steel	0.079	0.28	1.01	0.018	0.055	0.047	0.058	0.17	0.012					ø38×32
NCS HS 41758	Easy cutting Steel	0.079	0.30	0.986	0.015	0.056	0.023	0.051	0.15	0.049					ø38×32
NCS HS 41759	Alloy Structure Steel	0.21	0.008	0.57	0.21	0.012	0.78	0.015	0.025		0.017	0.003	0.0034		ø38×32
NCS HS 41760	Stainless steel	0.153	0.0071	0.56	0.26	0.035	16.30	1.92	0.078	0.055	0.005	0.081	0.002		ø38×38
NCS HS 41761	Alloy Structure Steel	0.121	0.0026	0.463	0.335	0.014	8.71	0.064	0.055	0.93	0.005	0.21			ø38×38
		V	Sn	Pb	As	Nb	N								
NCS HS 41755	Alloy Structure Steel	0.080													
NCS HS 41757	Easy cutting Steel		0.019	0.26	0.025										
NCS HS 41758	Easy cutting Steel		0.020	0.018	0.026										
NCS HS 41760	Stainless steel					0.012									
NCS HS 41761	Alloy Structure Steel					0.072	0.040								
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Ti	W	B	
NCS HS 92703-1	High Chromium Cast Iron	3.31	0.098	1.54	0.369	0.0047	1.17	2.57	1.47	0.952	0.449		0.015	0.177	ø30×30
NCS HS 92703-2	High Chromium Cast Iron	2.96	0.491	1.24	0.211	0.0077	9.75	1.99	2.17	0.669	1.57	0.300	1.99	0.142	ø30×30
NCS HS 92703-3	High Chromium Cast Iron	2.40	0.821	1.06	0.115	0.015	13.30	1.55	0.869	0.482	0.953	0.171	1.57	0.102	ø30×30
NCS HS 92703-4	High Chromium Cast Iron	2.00	1.16	0.803	0.090	0.025	18.28	1.07	0.598	0.380	0.738	0.087	1.05	0.086	ø30×30
NCS HS 92703-5	High Chromium Cast Iron	1.48	1.37	0.579	0.041	0.058	22.55	0.708	0.359	0.314	0.583	0.056	0.694	0.076	ø30×30
NCS HS 92703-6	High Chromium Cast Iron	1.16	1.44	0.302	0.033	0.086	25.76	0.289	0.150	0.146	0.845	0.019	0.370	0.055	ø30×30
NCS HS 92703-7	High Chromium Cast Iron	3.13	2.48	0.201	0.024	0.116	31.26	0.129	0.086	0.087	0.154	0.033	0.175	0.015	ø30×30
		Nb													
NCS HS 92703-1	High Chromium Cast Iron	0.018													
NCS HS 92703-2	High Chromium Cast Iron	0.182													
NCS HS 92703-3	High Chromium Cast Iron	0.149													
NCS HS 92703-4	High Chromium Cast Iron	0.071													
NCS HS 92703-5	High Chromium Cast Iron	0.022													
NCS HS 92703-6	High Chromium Cast Iron	0.014													
NCS HS 92703-7	High Chromium Cast Iron	0.010													

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Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mg	Ti	Ce	
NCS HS 92746	Alloy Cast Iron	3.36	2.44	0.231	0.040	0.0060	0.16	2.24	0.033	0.073	0.0060	ø30×30
Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Nb
NCS HS 93743	Stainless Steel	0.044	0.723	1.2	0.035	0.0013	18.45	9.21	0.148	0.405	0.068	0.504
NCS HS 93744	Stainless Steel	0.014	0.185	0.85	0.021	0.0031	19.62	23.45	1.23	4.4	0.054	0.086
NCS HS 93745	Stainless Steel	0.206	0.3	0.474	0.014	0.0036	10.5	0.639	0.072	0.748	0.196	0.353
		Co	Ti	Al	W	Sn	N					
NCS HS 93743	Stainless Steel	0.118										
NCS HS 93744	Stainless Steel	0.169	0.01	0.161	0.086							
NCS HS 93745	Stainless Steel	0.032				0.005	0.071					
Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V	Ti
NCS HS28705a-1	Pig Iron	4.3	0.228	1.48	0.014	0.153	0.012	0.022	0.0079	0.0035	0.558	0.0093
NCS HS28705a-2	Pig Iron	3.73	0.61	1.34	0.056	0.147	0.06	0.077	0.071	0.071	0.489	0.032
NCS HS28705a-3	Pig Iron	3.5	1.32	1.12	0.188	0.114	0.18	0.142	0.136	0.147	0.356	0.225
NCS HS28705a-4	Pig Iron	3.27	1.96	0.85	0.147	0.09	0.371	0.233	0.233	0.261	0.257	0.248
NCS HS28705a-5	Pig Iron	2.91	2.54	0.65	0.104	0.053	0.54	0.382	0.326	0.347	0.173	0.287
NCS HS28705a-6	Pig Iron	2.44	3.31	0.403	0.298	0.03	0.792	0.46	0.404	0.427	0.067	0.342
NCS HS28705a-7	Pig Iron	1.72	3.94	0.172	0.452	0.0091	0.99	0.525	0.51	0.524	0.016	0.586
		Al	Als	Sn	Co	Pb	B	Sb	Zn	As		
NCS HS28705a-1	Pig Iron	0.031	0.028	0.0006	0.082	0.0015	0.0008	0.0006	0.0006	0.0033		
NCS HS28705a-2	Pig Iron	0.0047	0.004	0.43	0.108	0.0002	0.0031	0.08	0.0009	0.0046		
NCS HS28705a-3	Pig Iron	0.076	0.074	0.033	0.056	0.0046	0.019	0.038	0.001	0.061		
NCS HS28705a-4	Pig Iron	0.052	0.05	0.065	0.038	0.017	0.075	0.052	0.0016	0.082		
NCS HS28705a-5	Pig Iron	0.125	0.12	0.108	0.02	0.0042	0.088	0.077	0.002	0.046		
NCS HS28705a-6	Pig Iron	0.065	0.061	0.187	0.0061	0.016	0.133	0.13	0.0025	0.015		
NCS HS28705a-7	Pig Iron	0.19	0.182	0.294	0.0048	0.022	0.225	0.228	0.0034	0.0061		
Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	S	Cu	Fe	Cr	Mo	Co	V	W
NCS HS35740	Corrosion-resistant alloy	0.026	0.493	1.27	0.0018*	0.024	4.03	15.62	19.72	2.49	0.149	3.59
NCS HS35741	Corrosion-resistant alloy	0.046	1.22	0.909	0.016		2.97	16.46	18.44	1.7	0.282	4.02
NCS HS35742	Corrosion-resistant alloy	0.2	1.4	0.1	0.035	0.45	8	20	15.9	0.055	0.62	6
NCS HS35743	Corrosion-resistant alloy	0.084	1.01	0.597	0.031	0.019	5.94	0.375	27.94	1.7	0.212	0.096
		Ti	Al	N	Ni*	P	Nb	Zr*	Ni			
NCS HS35740	Corrosion-resistant alloy	0.267	0.008	0.004								
NCS HS35741	Corrosion-resistant alloy	0.181	0.005	0.0091	53.8	0.05						
NCS HS35742	Corrosion-resistant alloy	0.2	0.7	0.008								
NCS HS35743	Corrosion-resistant alloy	0.034	0.016	0.0013		0.049	0.056	0.016	61.8			

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Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	
NCS HS37702-1	Medium-Low Alloy Steel	0.957	0.146	2.07	0.053	0.009	0.127	0.124	0.498	0.134	0.061	0.013	0.055	ø36×36
NCS HS37702-2	Medium-Low Alloy Steel	0.747	0.255	1.62	0.043	0.023	0.638	0.49	0.421	0.215	0.161	0.007	0.114	ø36×36
NCS HS37702-3	Medium-Low Alloy Steel	0.566	0.475	1.26	0.028	0.039	1.23	1.07	0.312	0.299	0.264	0.209	0.227	ø36×36
NCS HS37702-4	Medium-Low Alloy Steel	0.441	0.707	0.854	0.036	0.064	1.86	1.61	0.214	0.398	0.365	0.298	0.431	ø36×36
NCS HS37702-5	Medium-Low Alloy Steel	0.197	0.777	0.432	0.02	0.111	2.54	2.52	0.117	0.452	0.453	0.065	0.397	ø36×36
NCS HS37702-6	Medium-Low Alloy Steel	0.03	1.11	0.143	0.012		2.98	2.17	0.063	0.526	0.563	0.024	0.507	ø36×36
		Nb	N	As	Al									
NCS HS37702-1	Medium-Low Alloy Steel	0.023	0.007	0.004	0.301									
NCS HS37702-2	Medium-Low Alloy Steel	0.064	0.012	0.008	0.297									
NCS HS37702-3	Medium-Low Alloy Steel	0.116	0.014	0.006	0.124									
NCS HS37702-4	Medium-Low Alloy Steel	0.158	0.015	0.006	0.19									
NCS HS37702-5	Medium-Low Alloy Steel	0.225	0.053	0.003	0.184									
NCS HS37702-6	Medium-Low Alloy Steel	0.237	0.052	0.002	0.043									
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	V	Sn	
NCS HS93750	Heat - resisting alloy	0.365	2.34	0.94	0.025	0.001	24.56	19.19	0.038	0.022	0.016	0.082	0.016	ø38×40
		As*	Al*	B*	Nb	Sb*	Pb*	Co	W	N				
NCS HS93750	Heat - resisting alloy	0.002	0.005	0.0005	1.37	0.009	0.002	0.029	0.013	0.064				
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		TC	TS	CaO	MgO	SiO ₂	P ₂ O ₅	TiO ₂	MnO	Al ₂ O ₃	TFe	Zn	K ₂ O	
NCS HS 28710-1	Iron-bearing dust and sludge	0.28	0.48	2.08	0.9	2.44	0.5	0.054	1.99	0.37	45.42	12.17	2.47	30g
NCS HS 28710-2	Iron-bearing dust and sludge	8.62	0.63	53.54	3.79	5.18	0.052	0.16	0.075	1.41	5.83	0.042	0.57	30g
NCS HS 28710-3	Iron-bearing dust and sludge	0.94	0.5	10.27	1.62	1.5	0.24	0.049	0.76	0.26	56.59	1.03	1.04	30g
NCS HS 28710-4	Iron-bearing dust and sludge	5.15	1.82	24.03	11.84	7.54	0.082	0.16	7.18	3.43	13.61	0.3	5.45	30g
NCS HS 28710-5	Iron-bearing dust and sludge	4.88	0.36	1.23	0.2	2.24	0.23	0.072	0.21	0.76	62.68	0.2	0.43	30g
NCS HS 28710-6	Iron-bearing dust and sludge	7.5	1.11	20.01	3.3	3.99	0.25	0.21	1.28	1.85	28.25	2.15	2.15	30g
NCS HS 28710-7	Iron-bearing dust and sludge	2.2	0.82	29.61	36.46	4.77	0.037	0.13	3.24	5.29	2.21	0.15	0.55	30g
NCS HS 28710-8	Iron-bearing dust and sludge	18.16	0.34	8.26	1.35	8.6	0.2	0.37	0.22	3.8	39.68	0.037	0.23	30g
		Na ₂ O	V	Cd	F	Cr	Cl	As	Sb	Pb	LOI			
NCS HS 28710-1	Iron-bearing dust and sludge	2.56	0.014	0.0098	0.12	0.16	4.55	0.0062	0.01	0.6	8.99			
NCS HS 28710-2	Iron-bearing dust and sludge	0.11	0.0046	(0.00004)	0.22	0.0031	0.16	0.001	(0.0001)	0.0019	25.6			
NCS HS 28710-3	Iron-bearing dust and sludge	1.34	0.014	0.0009	0.057	0.016	0.82	0.0033	0.0012	0.055	1.23			
NCS HS 28710-4	Iron-bearing dust and sludge	2.19	0.0062	0.0003	1.75	0.041	1.35	0.0031	0.002	0.026	15.46			
NCS HS 28710-5	Iron-bearing dust and sludge	0.18	0.014	(0.00006)	0.032	0.014	0.066	0.0065	0.0007	0.0026	4.4			
NCS HS 28710-6	Iron-bearing dust and sludge	0.67	0.019	0.0032	0.45	0.023	1.46	0.0044	0.0021	0.11	21.98			
NCS HS 28710-7	Iron-bearing dust and sludge	1.2	0.0071	(0.00009)	1.19	0.68	0.57	0.002	0.0017	0.014	11.04			
NCS HS 28710-8	Iron-bearing dust and sludge	0.21	0.014	(0.00009)	0.026	0.0092	0.047	0.0036	0.0003	0.0053	20.01			
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	Al	
NCS HS 44731	Cast Iron	2.92	3.01	0.296	0.023	0.006	1.59	1.89	0.0029	0.089	0.299	0.034	0.026	32×28
		Sn	Mg	As	Co	Sb	B	W	Nb	La	Ce	Zr*	Pb*	
NCS HS 44731	Cast Iron	0.209	0.026	0.03	0.584	0.072	0.039	0.048	0.156	0.016	0.073	0.0018	0.0026	
Number	Name	Chemical Composition (Weight Percent) %												Unit Size (mm)
		C	Si	Mn	P	S	Ti	Nb	N	B	Alt	Als		
NCS HS 92747	Low Alloy Steel	0.0022	0.12	0.27	0.029	0.0071	0.022	0.031	(0.0026)	(0.0002)	0.0063	(0.0053)		38×32

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	
NCS HS 92748	Cast Iron	1.85	0.45	1.48	0.031	0.007	0.12	1.31	0.099	0.14	1.79	28×28
NCS HS 92749	Cast Iron	2.11	0.17	0.82	0.319	0.022	4.97	3.22	3.5	0.6	1.86	35×28
NCS HS 92750	High Chromium Cast Iron with Nitrogen	1.81	2	1.16	0.201	0.057	15.42	1.91	2.2	0.33	1.1	35×30
NCS HS 92751	High Chromium Cast Iron with Nitrogen	3.03	1.65	0.16	0.041	0.088	30.35	0.37	0.22	0.077	0.35	35×29
NCS HS 92752	Cast Iron	3.08	0.56	0.62	0.045	0.036	15.32	1.21	2.7	0.28	0.77	35×30
NCS HS 92753	Medium-Low Alloy Steel	0.08	0.3	2.03	0.01	0.06	0.04	0.03	0.98	0.4	1.03	30×25
		Mg	W	Ti	Sn	B	N	Al	Nb	As	Sn	Co
NCS HS 92748	Cast Iron	0.02	0.83	0.1	0.06	0.05						
NCS HS 92749	Cast Iron						0.021					
NCS HS 92750	High Chromium Cast Iron with Nitrogen						0.075					
NCS HS 92751	High Chromium Cast Iron with Nitrogen						0.108					
NCS HS 92752	Cast Iron			0.02								
NCS HS 92753	Medium-Low Alloy Steel		1.62	0.001		0.36		0.203	0.005	0.01	0.004	0.38
		Pb	Sb	Zr	Bi	Ca	Zn					
NCS HS 92753	Medium-Low Alloy Steel	0.003	0.07	0.047	0.009	0.0001	0.001					
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Ni	V	Pb	
NCS HS93707-1	Medium-Low Alloy Steel	0.228	0.48	0.817	0.01	0.034	0.515	0.142	3.47	0.295	0.008	36×30
NCS HS93707-2	Medium-Low Alloy Steel	0.495	0.12	0.427	0.025	0.013	2.41	1.11	1.01	0.377	0.0088	36×30
NCS HS93707-3	Medium-Low Alloy Steel	0.339	0.375	0.319	0.02	0.0051	1.03	0.291	3.98	0.053	0.012	36×30
NCS HS93707-4	Medium-Low Alloy Steel	0.373	0.173	0.595	0.032	0.028	1.45	0.49	2.8	0.166	0.0046	36×30
NCS HS93707-5	Medium-Low Alloy Steel	0.145	0.302	0.176	0.012	0.02	2.2	1.49	1.92	0.083	0.0012	36×30
NCS HS93707-6	Medium-Low Alloy Steel	0.729	0.177	0.404	0.03	0.02	2.67	0.614	0.492	0.115	0.0097	36×30
NCS HS93707-7	Medium-Low Alloy Steel	0.305	0.272	0.608	0.013	0.06	1.83	1.79	0.196	0.232	0.011	36×30
		Cu	Sn	As	Sb	Bi						
NCS HS93707-1	Medium-Low Alloy Steel	0.192	0.0011	0.054	0.015	0.006						
NCS HS93707-2	Medium-Low Alloy Steel	0.292	0.015	0.021	0.017	0.0061						
NCS HS93707-3	Medium-Low Alloy Steel	0.042	0.019	0.0072	0.012	0.001						
NCS HS93707-4	Medium-Low Alloy Steel	0.145	0.0065	0.013	0.013	0.006						
NCS HS93707-5	Medium-Low Alloy Steel	0.088	0.022	0.0032	0.0033	0.0041						
NCS HS93707-6	Medium-Low Alloy Steel	0.038	0.042	0.026	0.012	0.009						
NCS HS93707-7	Medium-Low Alloy Steel	0.128	0.013	0.07	0.022	0.019						
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	
NCS HS 93750a	Heat - resisting alloy	0.399	2.06	0.94	0.022	0.008	23.31	22.72	0.084	0.053	0.039	36×36
		V	Sn	Nb	Pb	Co	W	N				
NCS HS 93750a	Heat - resisting alloy	0.091	0.004	1.81	0.004	0.075	0.011	0.054				
Number	Name	Chemical Composition(%)										Unit Size (mm)
		Cu	Mg	Ti	B	La	Ce	Sn	As	Alt	W	
NCS HS92754	Cast Iron	0.155	0.018	0.098	0.023	0.0093	0.036	0.112	0.016	0.126	0.013	Φ33×29-31
		Pb	Sb	Nb	Co	Zr	Zn	Ca	Bi			
NCS HS92754	Cast Iron	0.0015	0.162	0.017	0.059	0.001	0.016	0.0007	0.0003*			
Number	Name	Chemical Composition(%)										Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	
NCS HS93753	Cast Iron	3.31	3.21	7	0.042	0.011	0.12	0.024	0.0044	0.0091	0.021	Φ35×20
		Ti	V	Mg								
NCS HS93753	Cast Iron	0.027	0.012	0.034								

Section 3 Ferroalloy(Powder)

Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)
NCS HC 11601a	Ferro Silicon	0.073	73.75	0.26	0.023	0.003	0.085	0.031	1.14	0.34		100
NCS HC 11602a	High Carbon Ferromanganese	6.69	0.08	68.94	0.143	0.005						70
NCS HC 11602b	High Carbon Ferromanganese	6.82	0.111	75.41	0.134	0.005						70
NCS HC 11602c	High Carbon Ferromanganese	6.15	1.88	66.2	0.11	0.013						70
NCS HC 11603a	Mn-Si Alloy	1.33	17.49	65.67	0.065	0.011						100
NCS HC 11603b	Mn-Si Alloy	1.34	17.63	66.37	0.065	0.008						100
NCS HC 11603c	Mn-Si Alloy	1.26	18.45	66.65	0.115	0.018						70
NCS HC 11604a	Si-Ca Alloy	0.94	56.02	0.037	0.054	0.073			1.97	30.45	6.93	50
NCS HC 11606	High Carbon Ferrochromium	6.37	4.29	0.32	0.023	0.013	64.17					100
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)
NCS HC 11605	Si-Ca-Ba-Sr	0.385	53.46	0.075	0.014	0.039			0.079	0.023	2.34	60
NCS HC 11607	Ferro Vanadium	0.235	1.67	0.321	0.121	0.01	49.4	0.021	0.022			70
NCS HC 11608	Ferro Vanadium	0.109	0.653	0.106	0.021	0.035	79.27	0.0024	0.0089	0.01	1.41	70
NCS HC 11609	Ferro Niobium	0.114	1.34	0.37	0.172	0.014			0.059		0.711	70
NCS HC 11610	Nitride Ferrochrome	0.04	0.525	0.313	0.02	0.042					0.087	70
NCS HC 11611	Ferrosilicon	0.035	74.03	0.25	0.02	0.0023					1.41	60
NCS HC 11612	Ferroboration	0.086	0.353	0.305	0.02	0.0018		20.82			0.018	70
NCS HC 11613	Ferroboration	0.181	0.549	0.35	0.03	0.0023		17.65			0.035	70
NCS HC 11614	Ferro Phosphorus	0.032	0.6	0.638	25.81	0.0038						70
NCS HC 11615	Ferro Phosphorus	0.13	0.382	1.07	21.49	0.061						70
NCS HC 11616	Ferro Nickel	2.12	3.25	0.051	0.039	0.283			0.022	13.34		60
NCS HC 11617	Ferro Nickel	1.85	3.11	0.041	0.037	0.213			0.021	16.45		60
NCS HC 11618	Ferro Nickel	1.65	2.54	0.053	0.032	0.211			0.021	10.7		60
NCS HC 11619	Si-Ca Alloy	0.55	61.11	0.053	0.048	0.029					2.15	50
Number	Name	Cr	N	Ca	B	Co	Fe	Mg	Ba	TFe	Sr	Unit Size (in g)
NCS HC 11605	Si-Ca-Ba-Sr	0.054		13.22				0.022	14.02	13.57	0.235	
NCS HC 11610	Nitride Ferrochrome	58.83	4.76									
NCS HC 11611	Ferrosilicon	0.063		0.208								
NCS HC 11612	Ferroboration				20.82							
NCS HC 11613	Ferroboration				17.65							
NCS HC 11616	Ferro Nickel	1.98				0.247						
NCS HC 11617	Ferro Nickel	1.87				0.241						
NCS HC 11618	Ferro Nickel	1.56				0.198						
NCS HC 11619	Si-Ca Alloy			27.15			6.61					
Number	Name	Si	Ca	Ba	Al	Chemical Composition(Percent)						Unit Size (in g)
NCS HC 13602	Si-Al-Ba-Alloy	32.01	1.17	7.41	32.55	0.197	0.017	0.27	0.0096	20.59	0.85	50
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)						Unit Size (in g)
NCS HC 14602	Si-Al-Ba	0.14	19.21	0.25	0.015	0.013	0.017	0.137	32.82	0.85	38.09	70
NCS HC 14603	Si-Al-Ba	0.13	24.12	0.14	0.015	0.015	0.085	0.061	32.84	0.71	33.54	70
NCS HC 14604	Si-Al-Ba	0.24	19.21	0.25	0.011	0.011	0.053	0.172	25.44	0.44	49.14	70
NCS HC 14605	Si-Al-Ba	0.13	25.94	0.12	0.018	0.012	0.152	0.045	36.67	1.35	24.97	60
NCS HC 14608	Si-Al-Ca-Ba Alloy	0.13	0.021	0.17	0.022	0.021	0.021	0.176	9.14	8.28	14.22	60
NCS HC 14609	Si-Al-Ca-Ba Alloy	0.22	33.41	0.33	0.018	0.017	0.116	0.32	14.46	5.74	35.46	60
NCS HC 14610	Si-Al-Ca-Ba Alloy	0.24	40.58	0.23	0.021	0.025	0.032	0.29	13.47	8.25	23.25	60
NCS HC 14611	Si-Al-Ca-Ba Alloy	1.56	56.74	0.065	0.016	0.14	0.0044	0.0097	1.47	13.61	5.77	60
Number	Name	Co	Ti	Mg	Sr	Chemical Composition(Percent)						Unit Size (in g)
NCS HC 14608	Si-Al-Ca-Ba Alloy	0.0022	0.084	0.21	0.132							
NCS HC 14609	Si-Al-Ca-Ba Alloy		0.055	0.18	0.092							
NCS HC 14610	Si-Al-Ca-Ba Alloy		0.124	0.12	0.094							
NCS HC 14611	Si-Al-Ca-Ba Alloy		0.126	0.045	0.22							

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ca	Ba	Co	Ti	
NCS HC 14612	Ferro Silicon	0.016	77.49	0.02	0.0074	0.003	0.0044	0.016	0.011	0.0074	0.0067	22.12	0.0012	0.011	60
NCS HC 14613	High Carbon Ferrochromium	7.56	2.58	0.18	0.02	0.032	54.04								50
NCS HC 14615	High Carbon Ferrochromium	8.07	2.3	0.23	0.017	0.045	56.16								50
NCS HC 14615a	High Carbon Ferrochromium	8.00	1.96	0.24	0.017	0.015	57.44	0.23							
		B	V	Fe											
NCS HC 14612	Ferro Silicon	0.0022													
NCS HC 14615a	High Carbon Ferrochromium		0.28	31.46											
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Ti	Nb	Ta	V	
NCS HC 18601	Ferro Silicon	0.19	72.44	0.205	0.019	0.010	0.109		2.16	0.64					50
NCS HC 18603	Si-Mn alloy	1.70	17.21	66.70	0.183	0.025									50
NCS HC 18604	Ferro Titanium	0.065	4.68	2.67	0.043	0.013		0.117	5.38		27.93				50
NCS HC 18606	Ferro Niobium	0.070	1.09	0.29	0.159	0.008			1.35		0.78	66.24	0.084		50
NCS HC 18608	Ferro Vanadium	0.403	0.76	0.26	0.049	0.043			0.158					48.93	50
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Mn	C	Si	Fe	S	P	Cr	Ni	Cu					
NCS HC15603a	Manganese Metal	97.43	0.081	0.27	2.04	0.0089	0.017	0.01	0.002	0.0049					50g
NCS HC15604a	Manganese Metal	93.65	0.062	0.31	5.07	0.02	0.0044	0.0056	0.0042	0.0032					50g
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Al	Fe	Mo	Al	
NCS HC11620	Ferro Phosphorus	0.034	1.77	1.36	25.7	0.0018	0.216	0.081	0.11	2.14					50
NCS HC11621	AlMnFe	0.093	0.185	4.54	0.012	0.0026	0.034		0.0061		56.32	36.45			50
NCS HC11622	AlFe	0.027	0.056	0.301	0.014	0.0024	0.036	0.015	0.0084				0.061	46.3	50
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	As	Fe	Sn	Sb	
NCS HC11623	Ferro Molybdenum	0.022	0.21	0.017	0.031	0.112	0.13	0.07	2.37	52.99	0.015	44.26	0.0046	0.0043	50
NCS HC11624	Ferro Niobium	0.149	3.57	0.302	0.13	0.019	0.047	0.016	0.077				0.061		50
NCS HC11625	Ferroboron	0.172	0.62	0.273	0.027	0.0026	0.044	0.013	0.011						50
NCS HC11626	Ferro Titanium	0.041	4.89	2.15	0.031	0.01			0.125						50
NCS HC11627	Ferro Titanium	0.036	3.99	1.23	0.063	0.014			0.22						50
NCS HC11628	Ferro Titanium	0.071	0.094	0.074	0.0085	0.0091			0.052						50
		Ti	Nb	V	Ta	Al	W	B	Ca	N					
NCS HC11624	Ferro Niobium	0.155	63.72	0.016	0.046	(0.076)	(0.007)								
NCS HC11625	Ferroboron	0.053				0.027		17.41							
NCS HC11626	Ferro Titanium	28.88				6.18		0.003	(0.0002)	0.009					
NCS HC11627	Ferro Titanium	40.41				7.19		0.0025	(0.0003)	0.022					
NCS HC11628	Ferro Titanium	69.84				2.78		0.001	0.014						

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		C	Si	Mn	P	Cr	Al	Ca	Fe	S	V	Sn	Ti	
NCS HC 19604	Ferro Titanium	0.041	3.46	1.59	0.051		10.64			0.011	0.158	0.056	43.82	100
NCS HC 19605	Ferro Titanium	0.032	4.20	0.81	0.032		8.58			0.009	0.303	0.061	38.78	100
NCS HC 19606	Ferro Vanadium	0.565	0.68	0.43	0.087	0.32	0.084			0.010	51.14			50
NCSHC19606a	Ferrovanadium	0.171	0.901	0.39	0.042	0.194	0.70			0.028	54.68		0.079	100
NCS HC 19607	Silicon Manganese Alloy	1.56	18.41	66.2	0.126					0.022				50
NCS HC 19608	Ferro Molybdenum	0.042	0.32		0.032					0.073				50
NCS HC 19609	Ferro Molybdenum	0.039	0.039*		0.041					0.085				25
NCS HC 19610	Vanadium pentoxide		0.40		0.007	0.099			0.43	0.014				50
NCS HC 19611	Vanadium pentoxide		0.102		0.010	0.018			0.061	0.011				50
NCS HC 19612	Ferrovanadium	0.151	0.68	0.12	0.025	0.146	1.26			0.041	80.10		0.025	100
		Cu	V ₂ O ₅	K ₂ O	Na ₂	As	Mo	Ni						
NCSHC19606a	Ferrovanadium						0.0026	0.015						
NCS HC 19608	Ferro Molybdenum	0.134					61.20							
NCS HC 19609	Ferro Molybdenum	0.36					58.13							
NCS HC 19610	Vanadium pentoxide		96.68	0.18	0.96	<0.001								
NCS HC 19611	Vanadium pentoxide		98.80	0.14	1.03	<0.001								
NCS HC 19612	Ferrovanadium						0.0016	0.008						
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		TV	Si	P	S	Mn	Fe	Cr	Ti	K	Na			
NCS HC19613	Vanadium Pentoxide	54.40	0.137	0.0078	0.192	0.055	0.30	0.128	0.063	0.11	0.31			25
NCS HC19613a	Vanadium Pentoxide	54.60	0.120	0.0065	0.160	0.030	0.183	0.133	0.042	0.11	0.27			25
NCS HC19613b	Vanadium Pentoxide	54.39	0.112	0.0074	0.172	0.018	0.119	0.147	0.022	0.11	0.25			25
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	W	B	Ca	
NCS HC 25602a	Ferromolybdenum	0.020	0.20		0.031	0.042		0.159						50
NCS HC 25603b	High Carbon Ferro Chrome	7.37	1.27	0.31	0.020	0.015	65.27			0.104				50
NCS HC 25605a	Si-Mn alloy	1.09	18.28	66.3	0.145	0.0104				0.18		0.0063		50
NCS HC 25605b	Si-Mn Alloy		14.20	69.77	0.153	0.0052							2.21	50
NCS HC 25605c	Si-Mn Alloy	0.456	21.87	67.2	0.132	0.0076	0.029	0.019		0.175		0.010		50
NCS HC 25606	Ferro Tungsten	0.055	0.34	0.12	(0.028)	0.048		0.043			76.66			50
NCS HC 25606a	Ferro Tungsten	0.036	0.34	0.102	0.033	0.052		0.079			76.24			50
NCS HC 25616	Ferro Silicon	0.081	76.74	0.17	0.02	0.004	0.14		1.80				0.30	50
NCS HC 25618	Ferro Silicon	0.066	76.42	0.14	0.025	0.003	0.097		0.78				0.19	50
NCS HC 25619a	Medium Carbon Ferro Manganese	1.18	0.75	81.95	0.163	0.0018								50
NCS HC 25619b	Medium Carbon Ferro Manganese	1.2	0.75	81.74	0.163	0.0018								50
NCS HC 25620	Medium Carbon Ferro Manganese	1.50	0.94	80.48	0.153	0.0030								50
NCS HC 25621	Medium Carbon Ferro Manganese	1.40	1.51	79.44	0.344	0.0029								50
NCS HC 25627	Ferro Silicon	0.081	76.74	0.172	0.023	0.004	0.140		1.80				0.30	50
NCS HC 25629	Low Carbon Ferro Manganese	0.300	0.63	84.28	0.196	0.0018								50
NCS HC 25629a	Low Carbon Ferro Manganese	0.31	1.06	81.68	0.196	0.0022								50
NCS HC 25629b	Low Carbon Ferro Manganese	0.560	0.96	80.79	0.169	0.0024								50
		Co	Ni	V	Fe	Sn	As	Mo						
NCS HC 25602a	Ferromolybdenum							62.19						
NCS HC 25603b	High Carbon Ferro Chrome	0.044	0.39	0.138	24.90									
NCS HC 25605c	Si-Mn Alloy	0.020	0.013	0.040	10.01									
NCS HC 25606a	Ferro Tungsten					0.041	0.041							
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		Cr	Si	P	C	S	Mn	V	Ni					
NCS HC25636b	Low Carbon Ferro Chrome	67.76	0.28	0.026	0.048	0.0044	0.298		0.331			50		
NCS HC25651a	Medium Carbon Ferrochromium	61.07	1.25	0.028	0.81	0.0028	0.83	0.11				50		

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Cr	Si	Mn	P	C	S	Al	Ca	Cu	Ni	B	Ti	N	
NCS HC 25632	High Carbon Ferro Manganese		0.69	78.41	0.204	6.68	0.0086								50
NCS HC 25633	Silicon chrome Alloy	33.90	44.06	0.29	0.013	0.045	0.002	1.00							50
NCS HC 25635a	Low Carbon Ferro Chrome	63.44	1.07	0.44	0.035	0.218	0.0033								50
NCS HC 25636a	Extra Low Carbon Ferro Chrome	62.81	0.32	0.39	0.028	0.028	0.028			0.032	0.34				50
NCS HC 25640a	Si-Mn Alloy		24.47	65.50	0.117	0.197	0.0079								50
NCS HC 25641	Silicox Manganese		27.88	60.29	0.078	0.082	0.0069				0.30	0.021	0.11		50
NCS HC 25642	Nitrided Ferro Manganese		1.70	71.02	0.183	1.11	0.0065							1.92	50
NCS HC 25643	Silicon chrome	32.62	19.17	0.129	0.0083	0.018	0.0025	1.24							50
NCS HC 25644	High nitrogen Fe-Cr	62.57	0.75		0.024	0.0064	0.029							8.69	50
NCS HC 25646	Si-Mn alloy		32.90	59.34	0.043	0.018	0.0034					0.048	0.24		50
NCS HC 25647	Low carbon Fe-Si	0.010	77.42	0.074	0.012	0.0068	0.003	0.011	0.003				0.043		50
NCS HC 25648	Silicon				0.0065			0.026	0.055				0.023		50
NCS HC 25649	Silicon				0.0067			0.032	0.06				0.026		50
NCS HC 25650	Ferro niobium				0.085	0.074	0.028	0.89		0.023			0.49		50
NCS HC 25652	Nitride Fe-Si		51.85		0.014	0.35	0.003						0.052	28.15	50
NCS HC 25653	High carbon Fe-Cr	62.49	0.15	0.11	0.025	8.70	0.024						0.016		50
NCS HC 25654	Silicon manganese		19.26	65.29	0.109	0.876	0.0122					0.022	0.19		50
NCS HC 25656	Ferro nickel	3.63	1.04		0.039	3.06	0.246				12.16				50
NCS HC 25657	Si-Mn alloy		25.03	67.96	0.065	0.58	0.011						0.18		50
NCS HC 25658	Ferro boron		1.68		0.017	0.022	0.016	0.99				20.58			50
		Co	V	Fe											
NCS HC 25635a	Low Carbon Ferro Chrome		0.093												
NCS HC 25636a	Extra Low Carbon Ferro Chrome	0.16	0.098	35.56											
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Cr	Si	Mn	P	C	S	Al*	Mo	Cu	Ni	V	Ti	Zn*	
NCS HC 26607b	High Carbon Ferrochrome	65.86	2.18	0.38	0.017	7.23	0.020				0.29		0.15		50
NCS HC 26608b	Ferro Vanadium	0.70	0.84	1.64	0.051	0.22	0.0044	0.002				50.57		0.0024	50
NCS HC 26608c	Ferro Vanadium	0.71	0.81	2.00	0.043	0.17	0.0040	0.0025				53.78		0.004	50
NCS HC 26610b	Ferro Molybdenum		1.54		0.036	0.042	0.059		61.85	0.29					50
NCS HC 26611b	Silicon Manganese Alloy		18.24	67.44	0.080	1.24	0.009								50
NCS HC 26620	Silicon Manganese Alloy		19.15	54.97	0.060	0.40	0.011						0.24		50
NCS HC 26621	Silicon Manganese Alloy		27.49	61.49	0.072	0.039	0.009						0.24		50
		Pb	Sn	Sb	As	W									
NCS HC 26610a	Ferro Molybdenum	(0.002)	(0.002)	(0.01)	0.015	0.011									
NCS HC 26610b	Ferro Molybdenum		(0.008)	(0.002)	0.008	0.060									
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Si	Mn	Al	Cr	P	Ca	C	S	Ti	Ni	Mo*			
NCS HC 25627a	Ferrosilicon	74.58	0.179	0.74	0.48	0.023	0.056	0.075	0.0038						50
NCS HC 26607c	High-Carbon Ferro Chromium	0.2	0.19		69.53	0.011		8.28	0.024	0.039	0.25				50
NCS HC 26621a	Silicon Manganese Alloy	23.02	63.94	0.003		0.06		0.29	0.01	0.34		0.0008			50

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		C	Si	Mn	P	S	Cu	Ti	Fe	V	Alt	Als	
NCS HC 26613	Ferro Titanium	0.019	1.84	1.11	0.020	0.013	0.005	30.24		0.20	8.16	8.10	50
NCS HC 26615	Nitride manganese		0.0086	91.56		0.031	0.0071		0.038				50
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Cr ₂ O ₃	SiO ₂	Fe ₂ O ₃	Crs	T.C	T.S	As	ZrO ₂	Al ₂ O ₃	CaO	MgO	
NCS HC 26617	Chrome oxide	96.19	0.26	0.054	1.34	0.006	0.002	(0.0001)					20
NCS HC 26618	Zirconium dioxide		0.11	0.054					99.48	0.009	0.17	0.093	20
NCS HC 26619	Titanium dioxide			0.006	1.34	0.011	0.006			0.65			98.21 20
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Si	Mn	Ti	Fe	Ca	Mg	RE	P	C	S	Cr	
NCS HC 28609	R _E -Mg Alloy	43.90	0.70	0.54	(31.67)	1.01	10.20	8.66					80
NCS HC 28611	R _E -Mg Alloy	43.22	0.55	0.362	(40.7)	0.84	5.70	5.10					80
NCS HC 28612	R _E -Mg Alloy	43.44	0.63	0.435	(36.43)	0.90	8.25	6.42					80
NCS HC 28615	Rare-earth Ferro Silicon	41.02	0.390	0.235		5.60		20.00					100
NCS HC 28616a	Silicon Manganese Alloy	14.33	62.530	0.222	20.000				0.205	2.28	0.020	0.060	50
NCS HC 28616b	Silicon Manganese Alloy	17.590	64.970	0.221	15.160				0.127	1.570	0.018	0.055	50
NCS HC 28618	Silicon Manganese Alloy	19.340	67.400	0.255	11.650				0.107	1.050	0.017	0.045	50
NCS HC 28619	High-Carbon Ferro Chromium	4.250	0.300	0.412	30.220				0.023	7.280	0.024	56.760	50
NCS HC 28620	High-Carbon Ferro Chromium	3.950	0.382	0.423	31.410				0.022	7.600	0.031	55.770	50
NCS HC 28621	High-Carbon Ferro Chromium	1.450	0.307	0.166	27.090				0.026	7.780	0.033	62.540	50
NCS HC 28622	High-Carbon Ferro Chromium	2.430	0.340	0.261	28.65				0.025	7.720	0.033	60.000	50
NCS HC 28624	Ferro Molybdenum	0.367	0.039		37.220				0.044	0.019	0.078	0.052	50
NCS HC 28625	HighCarbon Ferro Manganese	0.525	65.98	0.081	26.420		0.0006		0.805	6.140	0.0034	0.014	50
NCS HC 28626	HighCarbon Ferro Manganese	0.073	66.44	0.0035	26.620		0.0054		0.268	6.260	0.0014	0.032	50
NCS HC 28627	HighCarbon Ferro Manganese	0.208	66.27	0.027	26.600		0.004		0.428	6.230	0.0023	0.026	50
NCS HC 28628	Medium Carbon Ferromanganese	1.840	76.55	0.0065	17.860		0.0036		0.265	1.840	0.017	0.124	50
NCS HC 28629	Low Carbon Ferromanganese	0.475	82.61		16.470		0.0012		0.080	0.296	0.0022	0.033	50
NCS HC 28631	Ferroboron	0.180	0.310	0.017					0.025	0.400	0.0023	0.025	50
NCS HC 28632	Ferroboron	0.650	0.575	0.030					0.027	0.190	0.002	0.260	50
NCS HC 28633	Ferrovanadium	0.682	0.663				0.022		0.056	0.285	0.0044	0.110	50
NCS HC 28634	Ferrovanadium	1.890	0.365				0.115		0.093	0.475	0.014	0.289	50
NCS HC 28635	SiCaAl	43.60	0.095		17.53		15.18		0.051	1.000	0.040	0.054	50
NCS HC 28636	SiBaAl	50.36	0.110		16.68		1.44		0.016	0.34	0.038	0.083	50
NCS HC 28638	Ferro Titanium	4.51	0.362	27.34					0.015	0.033	0.0048	0.055	50

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		Chemical Composition(Percent)													
		Ni	Cu	V	Co	As	Sb	Pb	W	Mo	Sn	Zn	Al	B	
NCS HC 28616a	Silicon Manganese Alloy	0.167	0.080	0.095	0.048	0.015	0.003	0.001							
NCS HC 28616b	Silicon Manganese Alloy	0.092	0.096	0.060	0.035	0.010	0.001	0.001							
NCS HC 28618	Silicon Manganese Alloy	0.036	0.051	0.063	0.017	0.0099	0.0004	0.0001							
NCS HC 28619	High-Carbon Ferro Chromium			0.203											
NCS HC 28620	High-Carbon Ferro Chromium			0.175											
NCS HC 28621	High-Carbon Ferro Chromium			0.138											
NCS HC 28622	High-Carbon Ferro Chromium			0.153											
NCS HC 28624	Ferro Molybdenum	0.144	1.070			0.0078	0.0059	0.0022	0.047	61.00	0.0026				
NCS HC 28625	High Carbon Ferro Manganese	0.032	0.065	0.055		0.0047		0.0092				0.0082			
NCS HC 28626	High Carbon Ferro Manganese	0.109	0.072	0.133		0.0015		0.106				0.026			
NCS HC 28627	High Carbon Ferro Manganese	0.087	0.070	0.110		0.055		0.077				0.022			
NCS HC 28628	Medium Carbon Ferromanganese	0.132	0.152	0.100		0.055		1.300				0.0017			
NCS HC 28629	Low Carbon Ferromanganese	0.0032	0.127	0.041		0.017		0.126				0.011			
NCS HC 28631	Ferroboron	0.013	0.015	0.009									0.036	18.92	
NCS HC 28632	Ferroboron	0.056	0.050	0.010									0.185	19.33	
NCS HC 28633	Ferrovanadium	0.011	0.054	54.02		0.0017		0.0001				0.0026			
NCS HC 28634	Ferrovanadium	0.067	0.064	47.32		0.024		0.0004				0.0061			
NCS HC 28635	SiCaAl	0.026	0.046									16.63			
NCS HC 28636	SiBaAl	0.021	0.032									4.07			
NCS HC 28638	Ferro Titanium			0.15								7.82			
		Ba	Sr												
NCS HC 28635	SiCaAl	1.640	0.022												
NCS HC 28636	SiBaAl	24.260	0.095												
Number	Name	C	N	V	Si	Mn	P	S	Cr	Fe	Ca	Al	As	O*	Unit Size (in g)
NCS HC 28639	Vanadium Nitrogen Alloy	9.22	9.44	77.58	0.4	0.0091	0.147	0.0025	0.0032	1.95	0.066	0.24	0.0074	0.5	25
NCS HC 28640	Vanadium Nitrogen Alloy	6.01	13.31	76.73	0.4	0.0045	0.142	0.0019	0.019	1.76	0.1	0.28	0.012	0.7	25
NCS HC 28641	Vanadium Nitrogen Alloy	5.71	14.13	78.04	0.26	0.0065	0.012	0.0013	0.082	0.65	0.064	0.26	0.0014	0.6	25
NCS HC 28642	Vanadium Nitrogen Alloy	3.39	16.64	77.73	0.23	0.005	0.01	0.0016	0.082	0.57	0.044	0.24	0.0012	0.6	25
Number	Name	V ₂ O ₅	Si	P	Fe	K ₂ O	Na ₂ O	S	As						Unit Size (in g)
NCS HC 28643	Vanadium Pentoxide	98.44	0.054	0.0056	0.23	0.14	0.81	0.011	0.0013						25
Number	Name	Mo	C	Si	Mn	P	S	Cr	Ni	Cu	W	Sn	As	Sb	Unit Size (in g)
NCS HC 28644	Ferro Molybdenum	59.36	0.017	0.11	0.004	0.037	0.127	0.0072	0.016	0.133	0.144	0.04	0.116	0.017	50
NCS HC 28645	Ferro Molybdenum	57.44	0.014	0.033	0.003	0.047	0.11	0.0065	0.017	0.167	0.164	0.049	0.152	0.013	50
		Pb	Fe												
NCS HC 28644	Ferro Molybdenum	0.0015	39.87												
NCS HC 28645	Ferro Molybdenum	0.0017	41.78												
Number	Name	Si	Ca	P	Al	C	S	O	Fe*	Cr	Mn	Ni			Unit Size (in g)
NCS HC35610	Si-Ca Alloy	61.36	31.28	0.022	1.22	0.31	0.025	0.88	3.68						50
NCS HC35611	Si-Ca Alloy	64.82	27.98	0.021	1.13	0.23	0.011	0.78	4.18						50
NCS HC37622	Middle-Carbon Ferro Chromium	0.642		0.016		2.74	0.031			63.75	0.119	0.217			50

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)	
		Mn	Si	P	C	S	N	Cr	V ₂ O ₅	Fe	Na ₂ O	K ₂ O		
NCS HC 35601	Medium Carbon Ferromanganese	77.7	0.91	0.169	1.81	0.0022							50	
NCS HC 35602	Medium Carbon Ferromanganese	79.4	1.26	0.159	1.36	0.0022							50	
NCS HC 35603	Medium Carbon Ferromanganese	83.92	1.08	0.153	0.61	0.0024							50	
NCS HC 35604	Silicon Manganese Alloy	62.42	27.2	0.07	0.076	0.0096							50	
NCS HC 35605	Silicon Manganese Alloy	66.93	18.7	0.142	1.13	0.014							50	
NCS HC 35606	Nitrided Ferro Manganese	75.78	1.25	0.147	0.8	0.0082	5.63						50	
NCS HC 35607	High-Carbon FerroChromium	0.22	1.18	0.037	8.12	0.022		56.54					50	
NCS HC 35608	Vanadium Pentoxide		0.18	0.03					98.05	0.12	0.42	0.17	50	
NCS HC 35609	Ferro Nickel	0.16	2.3	0.054	2.58	0.288		2.25					50	
		As	S*	Cu	Co	Ni								
NCS HC 35608	Vanadium Pentoxide	0.0011	0.0009											
NCS HC35609	Ferro Nickel			0.023	0.29	10.01								
Number	Name	Si	Mn	P	Cr	Chemical Composition(Percent)							Unit Size (in g)	
NCS HC 37601	Ferro Silicon	68.91	0.177	0.024	0.142	2.18	26.88						80	
NCS HC 37602	Ferro Silicon	73.29	0.140	0.022		2.74	21.37	0.616					80	
Number	Name	Ca	Si	Mn	Ti	Fe	RE	Mg	Chemical Composition(Percent)					Unit Size (in g)
NCS HC 39601	R _E -Mg Alloy	3.21	40.31	2.72	1.50	20.81	20.09	9.50					75	
Number	Name	C	Si	Mn	P	Chemical Composition(Percent)								Unit Size (in g)
NCS HC 41601	Ferro Manganese	0.86	0.948	83.35	0.180	S	Cr	Ni	Cu	V	Co	Sn	150	
		As	Sb	Pb	N	Zn	Fe	Bi						
NCS HC 41601	Ferro Manganese	0.048	0.015	0.068	0.018	0.12	13.48	0.00005						
Number	Name	C	Si	P	S	Cu	Mo	Mn	Ti	Cr	B	V	Al	Unit Size (in g)
NCS HC 37603	Ferro Molybdenum	0.054	0.30	0.046	0.071	0.126	61.41							50
NCS HC 37604	Ferro Molybdenum	0.044	0.71	0.046	0.069	0.117	57.65							50
NCS HC 37605	Si-Mn Alloy	1.55	17.67	0.14	0.024			65.64						50
NCS HC 37606b	Silicon Manganese Alloy	2.26	13.87	0.42	0.040			60.13	0.25					50
NCS HC 37607	Low carbon ferro Chrome	0.086	1.39	0.034	0.005			0.35		64.32				40
NCS HC 37608	Low carbon ferro Chrome	0.243	0.99	0.039	0.019			0.34		64.06				40
NCS HC 37609	High carbon ferro Chrome	8.49	2.15	0.024	0.015			0.20	0.24	61.54				50
NCS HC 37611	High Carbon Ferro manganese	6.57	0.64	0.382	0.009			65.75						50
NCS HC 37612	Silicon Manganese Alloy	1.1	18.96	0.178	0.016			67.02	0.276					50
NCS HC 37614	Ferro Manganese	0.939	1.71	0.130				81.11				0.075		100
NCS HC 37615	High Carbon Ferrochrome	8.78	0.78	0.023	0.025				0.097	63.50				50
NCS HC 37616	Ferro Vanadium	0.081	0.50	0.016	0.012			0.58				49.72	5.18	50
NCS HC 37617	High Carbon Ferrochrome	8.32	1.91	0.021	0.040					59.35				50
NCS HC 37618	High Carbon Ferrochrome	8.44	0.30	0.026	0.026					69.12				50
NCS HC 37619	Carbon Chromium Alloy	12.53	0.22		0.008					83.83				50
NCS HC 37620	Si-Ca Alloy	0.68	60.09	0.017	0.033									50
NCS HC 37621	Si-Ca Alloy	0.71	60.19	0.031	0.020									50
		Ca	Als											
NCS HC 37620	Si-Ca Alloy	30.70	1.09											
NCS HC 37621	Si-Ca Alloy	25.25	1.55											
Number	Name	C	S	Si	Mn	Chemical Composition(%)								Unit Size (in g)
NCS HC 93616	Ferrosilicon	0.208	0.0033	73.61	0.237	0.023	0.022	0.0069	0.019	2.14	21.06	2.05	0.121	50
NCS HC 93617	Ferrosilicon	0.220	0.0039	76.34	0.237	0.025	0.027	0.0056	0.015	1.75	19.43	1.31	0.119	50

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	S	Si	Mn	P	Cr	Al	Ca	Fe	Cu	Ni	Ti		
NCS HC 93601	Ferrosilicon	0.148	0.0026	75.46	0.588	0.021	0.044	1.4	1.15	20.23	0.019	0.0093	0.097	50	
NCS HC 93602	Ferrosilicon	0.196	0.0052	74.8	11.09	0.024	0.052	1.28	0.986	20.96	0.013	0.0071	0.106	50	
NCS HC 93603	Ferrosilicon	0.095	0.0023	76.53	0.281	0.019	0.043	1.52	1.373	19.07	0.025	0.012	0.085	50	
NCS HC 93604	Micro Carbon Ferrochrome	0.038	0.015	0.466	0.103	0.022	68.13					0.26	0.016	50	
NCS HC 93605	High Carbon Ferrochromium	8	0.037	2.94	0.308	0.037	59.71					0.312	0.41	50	
NCS HC 93606	Ferro Molybdenum	0.073	0.044	0.19		0.037					0.494			50	
NCS HC 93607	Ferro Niobium	0.101	0.013	1.04		0.194		1.5			0.038		0.585	50	
NCS HC 93608	Ferro Titanium	0.095	0.015	0.3	0.255	0.014		3			0.281		32.22	50	
NCS HC 93609	High Carbon Ferrochromium	8.36	0.068	1.15	0.207	0.023	58.28							50	
NCS HC 93610	High Carbon Ferrochromium	7.99	0.03	0.26	0.225	0.018	70.15							50	
NCS HC 93611	High Carbon Ferrochromium	8.13	0.059	0.92	0.21	0.022	60.42							50	
NCS HC 93612	Si-Ca Alloy	2.44	0.1325	5.31		0.019		1.88	28.25	6.08				50	
NCS HC 93613	Si-Ca Alloy	1.30	0.088	56.2		0.018		1.77	31.67	5.58				50	
NCS HC 93622	Ferro Phosphorus	0.228	0.017	0.156	0.70	27.50	0.226						0.53	50	
NCS HC 93623	Ferroboron	0.45	0.0044	0.44		0.025		0.083					0.019	50	
NCS HC 93624	Silicon Manganese Alloy	1.79	0.024	16.87	64.86	0.120								50	
NCS HC 93625	Silicon Manganese Alloy	1.66	0.026	17.19	65.74	0.151								50	
NCS HC 93626	Silicon Manganese Alloy	1.91	0.020	16.42	63.80	0.097								50	
NCS HC 93627	Si-Ca Alloy	1.02	0.045	57.43		0.030		1.76	28.02	6.94				50	
NCS HC 93628	Ferro Vanadium	0.130	0.016	0.730	0.474	0.042		6.10						30	
NCS HC 93628a	Ferro Vanadium	0.152	0.017	0.730	0.475	0.043		6.03						30	
NCS HC 93629	Ferro Vanadium	0.032	0.014	0.86	0.046	0.036		1.33						25	
NCS HC 93630a	Vanadium Nitride Alloy	4.17	0.0084	0.16	0.015	0.064		0.19						25	
NCS HC 93630b	Vanadium Nitride Alloy	7.06	0.0018	0.103	0.057	0.0083		0.22						25	
NCS HC 93631	Si-Ca-Ba-Al Alloy	0.78	0.044	37.19	0.43	0.032		13.46	5.16	27.56				50	
NCS HC 93632	Si-Ba Alloy	0.99	0.13	47.56	0.16	0.024		2.78		11.75				50	
NCS HC 93633	Si-Al Alloy	0.45	0.022	28.31	0.426	0.023		29.67		37.44				50	
NCS HC 93634	Si-Ba-Ca Alloy	0.64	0.204	52.62	0.104	0.022		1.82	14.08	12.97				50	
NCS HC 93636	SiAlFe	0.11	0.0071	26.11	1.70	0.021		36.22						50	
NCS HC 93638	Ferrosilicon	0.9	0.037	65.74	0.182	0.025	0.099	1.27	3.15	18.67	0.054	0.029	0.131	50	
NCS HC 93639	Ferrosilicon	0.73	0.01	41.29	0.256	0.03	0.11	2.4	0.28	52.26	0.132	0.056	0.209	50	
NCS HC 93640	Ferrosilicon	1.12	0.055	63.21	0.15	0.022	0.088	1.33	4.4	16.85	0.069	0.024	0.125	50	
NCS HC 93641	Ferrosilicon	0.44	0.013	71.2	0.242	0.028	0.089	1.21	1.26	22.07	0.033	0.035	0.137	50	
NCS HC 93642	Ferrosilicon	0.56	0.013	73.39	0.216	0.032	0.084	1.12	1.14	18.96	0.032	0.046	0.135	50	
NCS HC 93643	Nitrided Ferro Silicon	0.52	0.019	49.67		0.018		0.72	0.45	15.08			0.071	50	
		Mo	Sb	Nb	Ta	B	V	N	Ba	Mg	Sr	Si ₃ N ₄			
NCS HC 93606	Ferro Molybdenum	56.12	0.036												
NCS HC 93607	Ferro Niobium			64.6	0.097										
NCS HC 93623	Ferroboron					18.69									
NCS HC 93628	Ferro Vanadium						50.24								
NCS HC 93628a	Ferro Vanadium						50.09								
NCS HC 93629	Ferro Vanadium						80.90								
NCS HC 93630a	Vanadium Nitride Alloy						76.54	15.23							
NCS HC 93630b							77.74	13.14							
NCS HC 93631	Si-Ca-Ba-Al Alloy								10.00	0.098					
NCS HC 93632	Si-Ba Alloy								27.54						
NCS HC 93634	Si-Ba-Ca Alloy								14.14	0.051	0.063				
NCS HC 93643	Nitrided Ferro Silicon											29.65			
Number	Name	Si	Al	Fe	Chemical Composition(%)										Unit Size (in g)
NCS HC 93614	SiAlFe	33.75	31.91	27.84											50
NCS HC 93615	SiAlFe	29.87	34.80	30.47											50

Section 3 Ferroalloy(Powder)

Number	Name	Chemical Composition(Percent)											Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Al	Ca	Mo	As	Cu		
NCS HC93644	High-Carbon Ferro Chromium	8.15	2.65	0.267	0.023	0.023	55.31							50
NCS HC93645	High-Carbon Ferro Manganese	6.24	0.68	64.42	0.209	0.014								50
NCS HC93646	Middle-Carbon Ferro Manganese	1.79	1.75	76.82	0.207	0.014								50
NCS HC93647	Mn-Si Alloy	1.65	17.3	66.65	0.135	0.015								50
NCS HC93648	Ferrosilicon	0.083	72.31		0.019	0.0021	0.165	1.37	1.28					50
NCS HC93649	Ferro Molybdenum	0.066	0.12		0.026	0.137				54.37	0.12	0.309		50
Number	Name	Cr	C	Si	Mn	P	S	Ti	V	Fe				Unit Size (in g)
NCS HC28646	High-Carbon Ferro Chromium	53.32	7.22	1.34	0.225	0.044	0.075	0.189	0.306	36.62				50g
NCS HC28647	High-Carbon Ferro Chromium	54.25	7.33	3.8	0.299	0.04	0.026	0.491	0.267	32.76				50g
NCS HC28648	High-Carbon Ferro Chromium	53.45	7.69	2.56	0.24	0.033	0.02	0.339	0.287	34.91				50g
NCS HC28649	High-Carbon Ferro Chromium	68.53	9.22	0.12	0.104	0.026	0.034	0.016	0.098	21.62				50g
NCS HC28650	High-Carbon Ferro Chromium	71.76	8.17	0.214	0.093	0.017	0.026	0.02	0.099	19.18				50g
Number	Name	Cr	C	S	Si	Mn	P	V	Ni	Cu	Zn	As	Sb	Unit Size (in g)
NCS HC28651	Low Carbon Ferrochrome	54.72	0.175	0.0049	0.78	0.159	0.029	0.229	0.278	0.0097	0.015	0.0014	0.0003	50g
Number	Name	SiC	SiO ₂	F.Si	F.C	T.C	Fe ₂ O ₃	Al ₂ O ₃	CaO	MgO				Unit Size (in g)
NCS HC28652	Silicon Carbide	98.69	0.32	0.19	-0.01	29.57	0.62	0.04	0.031	0.002				50g
NCS HC28653	Silicon Carbide	95.02	2.35	0.25	0.43	29.07	1.16	0.27	0.13	0.018				50g
NCS HC28654	Silicon Carbide	93.45	2.28	0.31	1.58	29.44	1.34	0.56	0.21	0.015				50g
NCS HC28655	Silicon Carbide	72.02	5.6	0.41	2.31	23.91	1.22	9.2	1.18	0.2				50g
NCS HC28656	Silicon Carbide	83.09	4.09	0.33	1.35	26.34	1.17	4.83	0.63	0.11				50g
NCS HC28657	Silicon Carbide	73.04	6.8	0.1	8.18	30.21	3.34	5.97	1.16	0.13				50g
NCS HC28658	Silicon Carbide	71.88	7.38	0.12	6.94	28.77	3.39	6.95	2.2	0.12				50g
NCS HC28659	Silicon Carbide	81.12	4.49	0.06	4.84	29.43	3.16	3.98	1.82	0.065				50g
NCS HC28660	Silicon Carbide	92.14	1.66	0.08	1.36	29.21	1.83	1.77	0.13	0.012				50g
Number	Name	Cr	C	S	Si	Mn	P	V	Ni	Cu	Zn	As	Sb	Unit Size (in g)
NCS HC28661	Low Carbon Ferrochrome	55.11	0.148	0.004	0.712	0.155	0.025	0.226	0.262	0.0094	0.014	-0.001	0.0002	50g
NCS HC28662	Low Carbon Ferrochrome	58.56	0.121	0.0051	0.543	0.167	0.028	0.195	0.294	0.011	0.012	0.002	0.0005	50g
NCS HC28663	Low Carbon Ferrochrome	55.26	0.066	0.0029	1.5	0.164	0.022	0.281	0.226	0.011	0.016	0.0062	0.0002	50g
NCS HC28664	Low Carbon Ferrochrome	54.38	0.071	0.003	0.527	0.164	0.033	0.246	0.257	0.018	0.015	0.0046	0.0002	50g
NCS HC28665	Low Carbon Ferrochrome	54.99	0.077	0.0033	1.47	0.164	0.025	0.28	0.236	0.012	0.016	0.0062	0.0002	50g
NCS HC28666	Low Carbon Ferrochrome	55.06	0.246	0.0031	0.418	0.211	0.025	0.24	0.216	0.01	0.0065	0.0017	0.0002	50g
NCS HC28667	Low Carbon Ferrochrome	58.13	0.11	0.0044	1.84	0.24	0.027	0.157	0.288	0.0073	0.0079	(0.001)	(0.0001)	50g
NCS HC28668	Low Carbon Ferrochrome	64.23	0.182	0.0028	1.53	0.337	0.031	0.102	0.284	0.03	0.0056	0.0031	0.0005	50g
Number	Name	Cr	Si	Ti	P	C	S	Mn	Ni	Cu	O	N	V	Unit Size (in g)
NCS HC37623	High Carbon Ferrochrome	49.71	4.06	0.501	0.01	7.1	0.015	0.42	0.254	0.029	0.09	(0.01)	0.324	50g
		Nb	Co	Fe										
NCS HC37623	High Carbon Ferrochrome	0.029	0.05	37.3										

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	Cu	K ₂ O	Na ₂ O	MgO	CaO	Pb
NCS DC 11001	Magnetite	44.73	18.22	0.75	0.20	12.91	0.013	1.50				4.18	7.14	60
NCS DC 11013	Iron ore	34.07	48.27	0.74	0.093	20.15	0.054	0.118	0.0031	0.165	0.065	2.86	0.99	70
NCS DC 11017	Iron ore	63.33	5.56	1.13	0.086	1.76	0.011	0.003	0.0045	0.115	0.07	1.3	1.05	70
NCS DC 11018	Iron ore	56.02	4.5	2.20	0.355	7.78	56.02	0.023	0.0044	0.038	0.057	2.87	9.89	70
		Zn	TiO ₂	As										
NCS DC 11013	Iron ore	0.0045	0.043	0.0003										
NCS DC 11017	Iron ore	0.0059		0.0006										
NCS DC 11018	Iron ore	0.065		0.0014										
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	P	S	FeO	Cu	C	Fe ₂ O ₃	L.O.I	Pb
NCS DC 11003a	Dolomite		0.098	0.083	31.49	21.06	0.0016	0.011				0.024	46.71	70
NCS DC 11004a	Iron ore	54.86	8.27	2.85	0.63	0.524	0.119	0.258	1.17	0.068	0.31			60
NCS DC 11005a	Iron ore	63.34	3.36	0.52	0.12	0.146	0.016	0.107	0.07#	0.034	0.119			60
NCS DC 11006a	Iron ore	54.74	8.53	1.48	1.02	0.657	0.036	0.439	3.9	0.102	0.227			60
NCS DC 11007a	Iron ore	52.24	10.2	6.84	0.561	0.606	0.346	0.094	4.21	0.015	0.549			60
NCS DC 11008a	Iron ore	57.54	7.08	2.14	1.25	0.75	0.073	0.442	8.42	0.095	0.204			60
NCS DC 11009a	Iron ore	61.96	4.92	0.914	0.375	0.364	0.027	0.212	15.13	0.063	0.128			60
		Zn	Na ₂ O	K ₂ O	MnO	As	TiO ₂	BaO	Co	Ti	Sr			
NCS DC 11003a	Dolomite		0.017	0.0030	0.061					0.0043	0.021			
NCS DC 11004a	Iron ore	0.144	0.047	0.26	1.04	0.096	0.12	0.86*	0.0054					
NCS DC 11005a	Iron ore	0.026	0.02	0.07	0.84	0.0044	0.034	0.62*	0.0031					
NCS DC 11006a	Iron ore	0.3	0.048	0.214	1.31	0.215	0.154	1.08*	0.0086					
NCS DC 11007a	Iron ore	0.066	0.093	0.61	0.194	0.051	0.237	0.028*	0.0043					
NCS DC 11008a	Iron ore	0.362	0.042	0.24	0.623	0.291	0.199	0.42*	0.011					
NCS DC 11009a	Iron ore	0.054	0.024	0.093	0.947	0.011	0.447	0.71*	0.0061					
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TMn	MnO ₂	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	TiO ₂	K ₂ O	Na ₂ O	Cr	FeO	Ni
NCS DC 11019	Manganese ore	18.36	25.59	8.89	21.94	5.66	2.83	0.611	0.206	1.04	0.045	0.012		60
NCS DC 11020	Manganese ore	22.31	30.34	9.66	28.11	7.69	2.36	1.72	0.27	1.11	0.056	0.026		60
NCS DC 11021	Manganese ore	26.53	36.6	11.01	22.1	6.99	2.31	0.774	0.247	1.01	0.064	0.019		60
NCS DC 11022	Manganese ore	29.48	41.76	10.22	19.84	6.49	1.82	0.65	0.224	0.89	0.062	0.018		60
NCS DC 11023	Manganese ore	35.54	52.73	10.25	13.03	3.8	2.34	0.78	0.143	0.396	0.053	0.0053		60
NCS DC 11024	Sintered Ore			55.37	5.64	2.19	10.76	2.14		0.082	0.045		(8.20)	70
NCS DC 11025	Pellet Ore			61.37	6.59	1.35	1.04	0.80		0.111	0.105		(1.92)	70
		Cu	V	P	Pb	As	Zn	BaO	S	MnO	TiO ₂			
NCS DC 11019	Manganese ore	0.014	0.014	0.202	0.08	0.031	0.118	0.43	0.114					
NCS DC 11020	Manganese ore	0.021	0.02	0.171	0.12	0.034	0.1	0.54	0.109					
NCS DC 11021	Manganese ore	0.021	0.02	0.163	0.124	0.052	0.164	0.8	0.084					
NCS DC 11022	Manganese ore	0.018	0.02	0.15	0.107	0.062	0.143	1.04	0.082					
NCS DC 11023	Manganese ore	0.011	0.016	0.105	0.058	0.112	0.066	1.62	0.052					
NCS DC 11024	Sintered Ore			0.056			0.0062		0.017	0.36	0.125			
NCS DC 11025	Pellet Ore			0.093			0.012		0.021	0.120	1.61			
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	SiO ₂	MnO	Al ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	P	Cu	As	S
NCS DC11012a	Iron Ore	62.86	2.62	1.16	0.85	2.17	2.41	0.057	0.016	0.188	0.0019	0.0085	0.026	60
NCS DC11033	Limonite	51.13	10.43	0.222	3.73	0.085	0.11	0.21	0.013	0.229	0.067	0.219	0.074	60
NCS DC11034	Serpentine		40.07	0.122	0.97	2.37	39.52			0.096				35
		Zn	Bi	Sn	Pb	FeO	C	P ₂ O ₅	Cr ₂ O ₃	TFe(Fe ₂ O ₃)	L.O.I			
NCS DC11012a	Iron Ore	0.149	0.0012	0.113	0.0024	27.22								
NCS DC11033	Limonite	0.283	0.023	0.0023	0.116	(0.46)								
NCS DC11034	Serpentine						0.65	0.024	0.422	7.86	8.83			

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Number	Name	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	(×10 ⁻²)		K ₂ O	Na ₂ O	MnO	TiO ₂	V ₂ O ₅	Unit Size (in g)
NCS DC11014a	Iron ore concentrate	66.67	6.08	0.32	0.097	0.046	0.017	0.0083	0.016	0.0077	0.27	0.491	0.25	70
NCS DC11015a	Iron ore concentrate	69.47	0.64	0.323	0.67	0.222	0.094	0.22	0.011	0.0068	0.28	0.51	0.26	70
NCS DC11016a	Iron ore concentrate	67.55	3.08	0.783	0.356	0.42	0.048	0.098	0.076	0.014	0.272	0.505	0.25	70
NCS DC11024a	Sintered ore	56.64	5.04	2.12	10.3	1.21	0.088	0.02	0.059	0.074	0.311	0.195		70
NCS DC11024b	Sintered ore	55.08	5.45	1.11	9.98	3.56	0.035	0.017	0.088	0.072	0.67	0.559	0.113	70
NCS DC11025a	Pellet ore	62.4	7.7	0.839	0.651	1.17	0.017	0.0023	0.075	0.094	0.199	0.191	0.028	70
NCS DC11025b	Pellet ore	65.53	3.01	0.61	0.545	2	0.014	0.011	0.087	0.221	0.046	0.088		70
		Zn	FeO											
NCS DC11014a	Iron ore concentrate	0.027	26.3											
NCS DC11015a	Iron ore concentrate	0.029	27.41											
NCS DC11016a	Iron ore concentrate	0.028	26.57											
NCS DC11024a	Sintered ore		8.16											
NCS DC11024b	Sintered ore	0.049	10.19											
NCS DC11025a	Pellet ore	0.013	(0.97)											
NCS DC11025b	Pellet ore		(0.82)											
Number	Name	TMn	MnO ₂	TFe	SiO ₂	Al ₂ O ₃	(×10 ⁻²)		TiO ₂	K ₂ O	Na ₂ O	Cr	Ni	Unit Size (in g)
NCS DC11026	Nickel ore			18.01	39.80	2.93	0.89	15.86	0.041	0.007	0.068	0.76	1.74	35
NCS DC11027	Mangnaese	48.93	72.89	5.07	6.16	3.20	0.10	0.12	0.15	1.32	0.19	0.0074	0.011	70
NCS DC11028	Mangnaese	42.44	62.66	7.76	9.08	5.56	0.17	0.11	0.23	1.76	0.25	0.011	0.0077	70
NCS DC11029	V Ti Magnetite			51.67	4.06	4.99	0.52	2.02	13.54	0.0081	0.023			70
NCS DC11030	V Ti Magnetite			49.12	5.52	5.1	1.16	2.3	12.8	0.023	0.073			70
NCS DC11031	V Ti Magnetite			46.74	8.19	5.49	1.18	2.6	12.24	0.021	0.057			70
NCS DC11032	Iron ore concentrate			70.69	0.293	0.32	0.066	0.045	0.535	0.012	0.01			70
		Cu	V	P	Pb	Co	Zn	BaO	S	MnO	V ₂ O ₅	FeO		
NCS DC11026	Nickel ore		0.010	(0.0021)		0.037	0.017		0.011	0.43				
NCS DC11027	Mangnaese	0.0067	0.041	0.089	0.0063	0.017	0.015	0.99	0.0084					
NCS DC11028	Mangnaese	0.0056	0.042	0.066	0.0072	0.014	0.013	0.32	0.0073					
NCS DC11029	V Ti Magnetite			0.046			0.045		0.259	0.238	0.59	27.3		
NCS DC11030	V Ti Magnetite			0.179			0.044		0.382	0.24	0.553	26.44		
NCS DC11031	V Ti Magnetite			0.101			0.041		0.21	0.226	0.539	24.39		
NCS DC11032	Iron ore concentrate			0.012			0.03				0.258	27.98		
Number	Name	P	S	Al ₂ O ₃	CaO	Fe ₂ O ₃	(×10 ⁻²)		Na ₂ O	SiO ₂	TiO ₂	MnO	L.O.I	Unit Size (in g)
NCS DC11035	Limestone	0.025	0.029	1	49.13	0.55	0.299	2.76	0.014	4.39	0.043	0.055	41.5	50
NCS DC11036	Limestone	0.0044	0.012	0.55	33.92	0.41	0.178	16.76	0.013	3.14	0.028	0.05	44.7	50
NCS DC11037	Limestone	0.003	0.013	0.402	48.26	0.2	0.172	4.95	0.011	2.46	0.021	0.0096	43.28	50
NCS DC11038	Limestone	0.0034	0.014	0.33	52.83	0.197	0.137	1.64	0.012	1.66	0.016	0.0096	43.05	50
NCS DC11039	Limestone	0.0041	0.014	0.466	51.66	0.225	0.203	2.07	0.009	2.24	0.022	0.0087	42.82	50
NCS DC11040	Limestone	0.0068	0.048	0.29	51.12	0.33	0.16	3.26	0.013	1.06	0.015	0.012	43.58	50
NCS DC11041	Limestone	0.0024	0.022	0.24	52.75	0.124	0.099	2.1	0.009	1.36	0.013	0.0057	43.42	50
NCS DC11042	Limestone	0.0024	0.016	0.33	50.14	0.194	0.145	3.53	0.009	2.3	0.018	0.0098	43.17	50
NCS DC11043	Limestone	0.0059	0.036	0.363	46.26	0.36	0.167	7.03	0.013	1.67	0.017	0.022	43.99	50
Number	Name	Zn	TFe	SiO ₂	Al ₂ O ₃	MnO	(×10 ⁻²)		S	TiO ₂	K ₂ O	Na ₂ O	MgO	Unit Size (in g)
NCS DC 13019c	Iron Concentrate	0.0030	68.96	3.98	0.174	0.049	28.98	0.010	0.0277	0.0174	0.0068	0.0060	0.268	50
NCS DC 13033	Iron Ore		35.36	48.50	0.11	0.125	5.18	0.022	0.0064	0.007			0.20	50
NCS DC 13034	Iron Ore		58.70	14.47	0.54	0.061	26.09	0.584	0.047	0.014			0.30	50
		CaO	Pb											
NCS DC 13019c	Iron Concentrate	0.196	0.0052											
NCS DC 13033	Iron Ore	0.13												
NCS DC 13034	Iron Ore	1.77												

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
NCS DC 14001a	Iron Ore	TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	Cu	K ₂ O	Na ₂ O	MgO	CaO	Ni	50
NCS DC 14010a	Iron Ore	58.52	7.77	2.71		19.03	0.019	0.092	0.048	0.272	0.057	1.31	1.82		50
NCS DC 14013a	Iron Ore	55.56	8.10	1.98		22.60	0.029	1.84	0.40	0.33	0.075	2.13	3.33		50
NCS DC 14019a	Dolomite		0.021	0.017	0.032		0.0010	0.018		0.0010	0.023	20.37	32.11		50
NCS DC 14022a	Fluorspar	0.166	3.06				0.014	0.35		0.026	0.006				65
NCS DC 14043	Hematite	57.78	11.18	1.52			1.48	0.046	0.187	0.066	0.22	0.023	0.54	0.56	50
NCS DC14005C	Iron Ore	64.38	3.97	1.311	0.269	25.33	0.042	0.353	0.0005	0.134	0.018	1.33	1.052		50
Chemical Composition(Percent)															
		Mn	Ti	L.O.I	Fe ₂ O ₃	SrO	CaF ₂	CaCO ₃	Co	TiO ₂	Pb	Zn	As	V ₂ O ₅	Cr ₂ O ₃
NCS DC 14001a	Iron Ore	0.056	0.044												
NCS DC 14010a	Iron Ore	0.63								0.121	0.008	0.134			
NCS DC 14013a	Iron Ore	0.31								0.103	0.009	0.062	0.035		
NCS DC 14019a	Dolomite			46.98	0.224										
NCS DC 14022a	Fluorspar						93.68	0.30							
NCS DC 14043	Hematite	0.104	0.070												
NCS DC14005C	Iron Ore									0.5	0.0005	0.03	0.0023	0.221	0.037
Number	Name	Chemical Composition(%)													Unit Size (in g)
NCS DC 19008a	Coulsonite	TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	V ₂ O ₅	TiO ₂	S	P	K ₂ O	Na ₂ O	100
NCS DC 52005a	Zinc Concentrate			2.21							29.52				30
Chemical Composition(%)															
		Co*	Cu*	Ni*	Cr*	As	Zn	Sb	Ag (g/t)	Cd	Pb	Cu	Fe		
NCS DC 19008a	Coulsonite	0.01	0.012	0.008	0.002										
NCS DC 52005a	Zinc Concentrate					0.22	51.03	0.029	124	0.31	1.97	0.23	7.17		
Number	Name	Chemical Composition(%)													Unit Size (in g)
NCS DC11044	pH of soil		4.55												35
NCS DC11045	pH of soil		8.97												35
NCS DC11046	pH of soil		8.16												35
NCS DC11047	pH of soil		7.08												35
Number	Name	Cu	As	Pb	Zn	MgO	Bi	Sb	F	Cd	S	Fe	Mn	SiO ₂	Unit Size (in g)
NCS DC 11048	Lead concentrate	0.225	0.44	58.98	5.61	0.16	0.0012	5.13	0.02	0.046	17.58	4.49	0.063	3.03	50
Chemical Composition(%)															
		K ₂ O	Na ₂ O	CaO	Al ₂ O ₃	Sn	Ag	Co	Au*	Hg*	Se*	Ge*			
NCS DC 11048	Lead concentrate	0.074	0.01	0.148	0.35	0.027	0.76	0.0013	(0.08)	(8)	(25)	(3)			

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		SiO ₂	S	P	K ₂ O	Na ₂ O	TFe	Al ₂ O ₃	FeO	TiO ₂	MgO	CaO	Mn	Fe ₂ O ₃	
NCS DC 14049	Iron Ore	4.62	0.020	0.037	0.33	0.027	63.86	2.04	0.25	0.12	0.056	0.082	0.17		65
NCS DC 14050	Limestone	7.97	0.039	0.0033	0.021	0.015		0.36			9.45	42.62		0.260	50
		MnO	L.O.I	Ti	Sr										
NCS DC 14049	Iron Ore														
NCS DC 14050	Limestone	0.015	38.80	0.0096	0.017										
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	Cu	
NCS DC 14009a	Sintered Ore	55.58	20.06	9.95	2.38	3.62	5.99	0.097	0.017	0.266	0.106	0.316	0.068	0.017	50
NCS DC 14014b	Limestone			0.073	0.079	55.12	0.73	0.0058	0.0013		0.010	0.0030	0.0075		50
NCS DC 14015b	Limestone			2.06	0.74	51.41	2.31	0.013	0.0021		0.273	0.0062	0.0073		50
NCS DC 14017b	Limestone			0.85	0.61	54.11	0.79	0.0074	0.0017		0.182	0.0038	0.021		50
NCS DC 14018b	Dolomite			0.77	0.23	31.96	19.92	0.031	0.0023		0.010	0.030	0.033		50
NCS DC 14020b	Dolomite			4.21	0.92	35.73	15.28	0.022	0.0032		0.030	0.017	0.015		50
NCS DC 14028d	Magnetite Concentrate	64.37	20.96	2.95	1.10	1.17	1.30		0.013		0.371	0.036	0.017		100
		Zn	Fe ₂ O ₃	L.O.I	Ti	Sr	Mn								
NCS DC 14009a	Sintered Ore	0.011													
NCS DC 14014b	Limestone		0.341	43.53	0.0010	0.025									
NCS DC 14015b	Limestone		0.838	41.79	0.0071	0.023									
NCS DC 14017b	Limestone		0.319	42.79	0.0021	0.024									
NCS DC 14018b	Dolomite		0.269	46.24	0.011	0.0081									
NCS DC 14020b	Dolomite		0.533	42.69	0.025	0.026									
NCS DC 14028d	Magnetite Concentrate				0.294		0.147								
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	P	S	Cu	Mn	Ti	K ₂ O	Na ₂ O	
NCS DC 14202	Sintering ore	52.77	6.55	7.51	2.54	11.33	2.02	0.060	0.033	0.012	0.199	0.062	0.078	0.033	50
NCS DC 14203	Sintering ore	57.63	10.80	5.38	1.37	8.17	1.65	0.102	0.025	0.0063	0.174	0.113	0.065	0.046	50
NCS DC 14204	Sintering ore	54.62	9.26	7.94	1.49	9.29	1.74	0.039	0.024	0.014	0.193	0.092	0.046	0.019	50
NCS DC 14205	Sintering ore	53.99	9.34	6.61	2.69	10.28	2.31	0.061	0.017	0.0087	0.190	0.099	0.078	0.037	50
NCS DC 14206	Sintering ore	51.13	9.22	8.58	2.44	9.46	4.40	0.066	0.059	0.007	0.179	0.094	0.080	0.040	50
NCS DC 14208	Iron Ore	65.56	26.01	6.09	0.28	0.11	0.11	0.0155	0.0045	0.001	0.135	0.283	0.009	0.006	50
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	MnO	TiO ₂	V ₂ O ₅	K ₂ O	Na ₂ O	
NCS DC14201a	Sintered Ore	50.71	10.363	5.03	1.907	10.899	3.366	0.11	0.161	0.669	0.112	0.024	0.114	0.0963	50
NCS DC14202a	Sintered Ore	53.364	9.133	5.646	2.119	8.606	2.783	0.0373	0.0727	0.549	0.133	0.0313	0.1071	0.0326	50
NCS DC14203a	Sintered Ore	54.58	18.76	5.85	1.269	8.578	1.98	0.0269	0.0383	0.415	0.109	0.0319	0.0919	0.0265	50
NCS DC14204a	Sintered Ore	54.21	10.606	4.53	0.93	9.604	2.965	0.0443	0.0852	0.716	0.0756	0.0229	0.102	0.0973	50
NCS DC14205a	Sintered Ore	50.967	7.832	5.504	1.351	11.065	2.577	0.0371	0.0616	0.495	0.11	0.0316	0.106	0.111	50
NCS DC14206a	Sintered Ore	57.61	23.435	3.637	1.039	7.464	1.929	0.0316	0.0956	0.505	0.09	0.0259	0.083	0.0683	50
NCS DC14208a	Iron Ore	66.53	26.34	6.062	0.31	0.097	0.039	0.008	0.015	0.279	0.5	0.231	0.015	0.007	50
		Cu	Pb	As	Zn	Cr ₂ O ₃									
NCS DC14201a	Sintered Ore	0.072	0.046	0.0136	1.519	0.02									
NCS DC14202a	Sintered Ore	0.0581	0.034	0.011	1.155	0.0224									
NCS DC14203a	Sintered Ore	0.038	0.0152	0.0084	0.4296	0.0245									
NCS DC14204a	Sintered Ore	0.0716	0.0431	0.0124	1.651	0.0241									
NCS DC14205a	Sintered Ore	0.0507	0.0282	0.0102	1.016	0.0198									
NCS DC14206a	Sintered Ore	0.0436	0.0185	0.0073	0.645	0.0269									
NCS DC14208a	Iron Ore	0.001													

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	MnO	TiO ₂	V ₂ O ₅	K ₂ O	Na ₂ O	
NCS DC14217	Sintered Ore	50.53	9.867	4.84	1.12	10.811	4.03	0.0474	0.0826	0.667	0.0758	0.0225	0.106	0.0983	50
NCS DC14218	Sintered Ore	57.57	4.8	6.293	2.329	3.534	2.324	0.0261	0.0343	0.209	0.196	0.05	0.176	0.0911	50
NCS DC14219	Sintered Ore	54.63	9.305	5.03	1.284	8.322	2.845	0.0422	0.07	0.588	0.102	0.0319	0.122	0.0978	50
		Cu	Pb	As	Zn	Cr ₂ O ₃									
NCS DC14217	Sintered Ore	0.0698	0.0438	0.0137	1.483	0.0235									
NCS DC14218	Sintered Ore	0.0272	0.0113	0.0036	0.117	0.0193									
NCS DC14219	Sintered Ore	0.0647	0.0376	0.011	1.242	0.0231									
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	P ₂ O ₅	L.O.I				
NCS DC14220	Bauxite	26.56	63.53	1.97	0.98	1.93	0.35	0.21	2.59	0.26	1.39			50	
NCS DC14221	Bauxite	10.07	83.61	1.71	0.45	0.18	0.2	0.036	3.27	0.22	0.098			50	
NCS DC14222	Bauxite	6.01	87.5	1.61	0.58	0.12	0.087	0.15	3.14	0.13	0.61			50	
NCS DC14223	Bauxite	6.97	88.34	1.24	0.29	0.4	0.078	0.28	1.57	0.11	0.66			50	
NCS DC14224	Corundum	0.68	96	0.21	0.31	0.28	0.048	0.014	2.28	0.024	(0.04)			50	
NCS DC14225	Corundum	0.061	99.04	0.043	0.029	0.012	0.002	0.45	0.024	0.016	0.29			50	
NCS DC14226	Corundum	0.061	99.02	0.04	0.028	0.013	0.003	0.43	0.02	0.013	0.34			50	
Number	Name	Chemical Composition(%)													Unit Size (in g)
		Zn	Cu	Pb	As	MgO	Bi	Sb	F	Cd	S	Fe	Mn	SiO ₂	
NCS DC11049	Zinc concentrate	41.72	0.13	0.74	1.8	0.418	0.00017	0.19	0.012	0.314	29.47	14.03	0.114	4.13	50
NCS DC11050	Zinc concentrate	44.05	1.216	0.088	0.74	0.059	0.019	0.009	0.054	0.242	31.37	15.77	0.069	0.81	50
NCS DC11051	Zinc ore	37.08	1.04	0.077	1.75	0.264	0.017	0.0097	0.43	0.203	27.43	15.33	0.067	8.02	50
NCS DC11052	Zinc ore	31.23	0.88	0.067	2.8	0.46	0.015	0.011	0.8	0.17	24.08	14.78	0.063	15.15	50
NCS DC11053	Zinc ore	25.87	0.73	0.06	3.69	0.62	0.015	0.012	1.15	0.144	21.47	14.72	0.062	21.04	50
NCS DC11054	Zinc ore	20.33	0.59	0.048	4.46	0.76	0.014	0.013	1.38	0.107	18.12	14.36	0.063	25.96	50
NCS DC11055	Zinc ore	10.38	0.32	0.032	6.18	1.06	0.012	0.014	1.92	0.059	12.55	13.78	0.054	36.84	50
NCS DC11056	Zinc ore	15.3	0.46	0.04	5.46	0.92	0.013	0.013	1.66	0.085	15.38	14	0.057	31.71	50
NCS DC11057	Zinc ore	0.31	0.047	0.013	7.91	1.38	0.0101	0.017	2.48	0.0019	6.8	12.99	0.047	48.03	50
		K ₂ O	Na ₂ O	CaO	Al ₂ O ₃	Sn	Ag	Co	Au	Hg	Se	Ge			
NCS DC11049	Zinc concentrate	0.037	0.009	0.69	0.24	0.026	0.021	0.0051	(0.000005)	0.003	(0.0003)	(0.00007)			
NCS DC11050	Zinc concentrate	0.059	0.013	0.81	0.21	0.065	0.009	0.0009	0.000027	(0.00015)	(0.0004)	(0.00003)			
NCS DC11051	Zinc ore	0.55	0.09	1.06	1.51	0.058	0.0076	0.0022	0.000027	0.00015	(0.0004)	(0.00005)			
NCS DC11052	Zinc ore	0.97	0.163	1.35	2.66	0.052	0.0067	0.0032	0.000027	0.00013	(0.0004)	(0.00005)			
NCS DC11053	Zinc ore	1.33	0.24	1.52	3.64	0.05	0.0058	0.0043	0.000026	0.00011	(0.0004)	(0.00006)			
NCS DC11054	Zinc ore	1.68	0.29	1.76	4.56	0.044	0.0047	0.0052	0.000027	0.00009	(0.0003)	(0.00006)			
NCS DC11055	Zinc ore	2.4	0.39	2.15	6.55	0.037	0.003	0.007	0.000024	0.00004	(0.0003)	(0.00007)			
NCS DC11056	Zinc ore	2.07	0.35	1.93	5.57	0.041	0.0039	0.0062	0.000025	0.00007	(0.0003)	(0.00007)			
NCS DC11057	Zinc ore	3.07	0.52	2.55	8.52	0.025	0.0012	0.0089	0.000024	0.000011	(0.0002)	(0.00007)			
Number	Name	Chemical Composition(%)													Unit Size (in g)
		Cu	As	Pb	Zn	MgO	Bi	Sb	F	Cd	S	Fe	Mn	SiO ₂	
NCS DC11058	Copper Concentrate	26.96	0.71	1.53	5.77	0.031	0.072	0.12	0.05	0.033	33.29	27.72	0.0099	0.55	50
NCS DC11059	Copper Concentrate	23.92	1.56	1.35	5.05	0.187	0.072	0.108	0.36	0.029	30.09	25.84	0.0137	6.28	50
NCS DC11060	Copper Concentrate	20.67	2.36	1.21	4.4	0.327	0.056	0.096	0.63	0.025	26.54	23.82	0.0179	11.27	50
NCS DC11061	Copper Ore	18.63	2.79	1.04	3.89	0.427	0.049	0.084	0.8	0.023	24.23	22.65	0.021	14.6	50
NCS DC11062	Copper Ore	14.37	3.89	0.83	3.17	0.64	0.041	0.07	1.17	0.018	20.73	20.63	0.027	22.03	50
NCS DC11063	Copper Ore	12.16	4.43	0.7	2.73	0.73	0.037	0.061	1.36	0.016	18.3	19.23	0.029	25.58	50
NCS DC11064	Copper Ore	9.59	5.55	0.57	2.24	0.88	0.03	0.049	1.57	0.014	16.44	18.65	0.035	30.35	50
		K ₂ O	Na ₂ O	CaO	Al ₂ O ₃	Sn	Ag	Co	Au	Hg	Se	Ge			
NCS DC11058	Copper Concentrate	0.045	0.011	0.073	0.17	1.02	0.144	0.0006	0.000065	(0.00006)	0.0014	(0.0001)			
NCS DC11059	Copper Concentrate	0.42	0.068	0.37	1.12	0.9	0.126	0.00162	0.000061	(0.00004)	0.0012	(0.0001)			
NCS DC11060	Copper Concentrate	0.76	0.13	0.63	2.06	0.78	0.111	0.0024	0.000058	(0.00004)	0.0012	(0.0001)			
NCS DC11061	Copper Ore	0.95	0.16	0.81	2.61	0.69	0.095	0.003	0.000051	0.000032	0.0011	(0.00008)			
NCS DC11062	Copper Ore	1.43	0.24	1.2	3.9	0.56	0.076	0.0042	0.000049	-0.00003	0.0010	(0.00008)			
NCS DC11063	Copper Ore	1.62	0.27	1.36	4.43	0.47	0.064	0.005	0.000043	-0.00003	(0.0007)	(0.00009)			
NCS DC11064	Copper Ore	1.97	0.34	1.66	5.4	0.37	0.051	0.0063	0.000042	-0.00004	(0.0007)	(0.00010)			

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Number	Name	TFe	SiO ₂	Al ₂ O ₃	CaO	Chemical Composition(Percent)								As	Unit Size (in g)
NCS DC 14209	Manganese Ore	8.83	21.83	5.57	12.70	0.60	0.199	0.115	1.04	0.046	18.26	0.20	25.41	0.031	50
NCS DC 14210	Manganese Ore	9.66	28.05	7.47	2.46	1.67	0.171	0.100	1.11	0.061	22.09	0.26	30.28	0.034	50
NCS DC 14211	Manganese Ore	10.96	21.85	6.91	2.30	0.74	0.163	0.084	0.99	0.059	26.25	0.24	36.87	0.051	50
NCS DC 14212	Manganese Ore	10.16	19.80	6.48	1.87	0.65	0.149	0.079	0.86	0.058	29.40	0.22	42.13	0.059	50
NCS DC 14213	Manganese Ore	10.28	13.04	3.77	2.47	0.75	0.104	0.053	0.40	0.056	35.71	0.14	53.06	0.107	50
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Chemical Composition(Percent)						Unit Size (in g)			
NCS DC 14214	Magnesia	0.595	0.507	0.53	1.24	MgO	P ₂ O ₅	MnO	K ₂ O*	Na ₂ O	TiO ₂	L.O.I		50	
NCS DC 14215	Magnesia	2.09	0.26	0.819	1.63	94.1	0.125	0.052	0.005	0.009	0.018	0.89		50	
NCS DC 14216	Magnesia	6.55	0.714	0.799	2.42	87.26	0.037	0.051	0.009	0.034	0.027	2.07		50	
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	Chemical Composition(Percent)						Unit Size (in g)			
NCS DC 15001	Iron Ore	62.52	4.88	2.66	0.061	0.056	0.0152	0.0016	0.104	0.044	0.023			100	
NCS DC 15002a	Iron Ore	55.81	13.00	1.93	0.026	0.011	0.469	0.134	0.083	0.36	1.10			50	
NCS DC 15004	Zhao-Cheng Iron Ore	47.86	27.95	1.12	0.082	0.032	0.235	0.0023	0.068	0.96	1.72			100	
		K ₂ O	Na ₂ O	FeO	As	Pb	Zn								
NCS DC 15002a	Iron Ore	0.433	0.33	1.86	0.23	0.319	0.161								
NCS DC 15004	Zhao-Cheng Iron Ore	0.062	0.043	21.99											
Number	Name	TFe	SiO ₂	Al ₂ O ₃	Mn	Chemical Composition(Percent)								Acid insoluble	Unit Size (in g)
NCS DC 16002	Iron Concentrate	71.79	0.36	0.069	0.053	0.0022	0.055	0.038	28.69						100
NCS DC 16004	Manganese ore	3.65	10.76	1.21		0.314		1.11		15.95	44.24	30.16			60
NCS DC 16005	Iron ore	52.98	4.51			0.016	1.242	11.64	26.13	0.149			5.65	4.72	100
NCS DC 16006	Limestone		3.72	0.885		0.0054	0.101	4.55		65.20	0.013				15
		K ₂ O	Na ₂ O	Fe ₂ O ₃	L.O.I										
NCS DC 16006	Limestone	0.19	0.021	0.46	25.06										
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	Chemical Composition(Percent)								Unit Size (in g)	
NCS DC 18011	Iron Ore	61.80	4.52	3.05	0.170	0.30	0.076	0.022	0.134	0.102	0.051	9.25			100
NCS DC 18017	Sintering ore	48.44	8.40	2.98	0.81	11.17	0.065	0.155	0.23	2.32		15.52	0.030	0.13	100
NCS DC 18018	Sintering ore	54.90	5.81	2.34	0.29	7.87	0.064	0.036	0.50	2.41		10.36			100
NCS DC 18019	Sintering ore	54.03	6.11	2.57	0.70	7.98	0.073	0.027	0.24	2.71		10.50	0.021		100
NCS DC 18020	Sintering ore	41.81	10.21	3.23	1.80	21.87	0.159	0.302	0.50	4.85		18.30	0.051	0.223	100
		Pb													
NCS DC 18015	Iron Ore														
NCS DC 18017	Sintering ore	0.061													
NCS DC 18018	Sintering ore														
NCS DC 18019	Sintering ore														
NCS DC 18020	Sintering ore	0.208													

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Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	Chemical Composition(Percent)									Unit Size (in g)
NCS DC 19013	Iron Ore	42.89	22.08	4.1	1.66	0.099	0.26	0.51	0.124						50
Number	Name	SiO ₂	Al ₂ O ₃	CaO	MgO	Chemical Composition(Percent)									Unit Size (in g)
NCS DC19008a	V-Ti Magnetite	28.36	11.11	10.71	11.79	0.158	13.92	0.268	18.54	0.189		0.108	0.285		100
NCS DC 19003b	V-Ti Iron Concentrate	1.4	3.36	0.055	1.34	0.78	26.53	0.43	59.51		0.042	0.0049	0.013	0.028	70
NCS DC 19003c	V-Ti-Iron Concentrate	2.96	3.33	0.326	3.14	0.708	33.43	0.434	56.68	0.012	0.033	0.0042	0.406		100
NCS DC 19016	V-Ti Pellet	6.43	3.07	1.08	1.88	0.51	1.01	0.199	55.23	0.123	0.34	0.037	0.0087	0.033	100
NCS DC 19017	Titanium concentrate	5.99	1.64	1.75	5.18	0.09	32.56	0.709	29.12		0.014	0.117	0.008		100
NCS DC 19018	Titanium concentrate	11.73	4.47	3.14	6.88	0.101	29.7	0.524	27.3		0.0085	0.558	0.028		100
NCS DC 19019	Titanium concentrate	0.578	0.53	0.028	0.32	0.137	25.05	1.55	34.56		0.054	0.0048	0.01		100
NCS DC 19020	V-Ti sintered Ore	5.50	3.28	9.94	3.05	0.481	7.76	0.426	49.42	0.166		0.028	0.026		100
		Co	Ni	TiO ₂	Na ₂ O	Co*	Cu*	Ni*	Cr*						
NCS DC19008a	V-Ti Magnetite			7.56	0.735	0.010	0.012	0.008	0.002						
NCS DC 19003b	V-Ti Iron Concentrate	0.015	0.014	10.21											
NCS DC 19003c	V-Ti-Iron Concentrate		0.025	10.25	0.036										
NCS DC 19016	V-Ti Pellet	0.01	0.021	7.69	0.173										
NCS DC 19017	Titanium concentrate			45.71											
NCS DC 19018	Titanium concentrate			33.94											
NCS DC 19019	Titanium concentrate			49.78											
NCS DC 19020	V-Ti sintered Ore			7.12	0.061										
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	Chemical Composition(Percent)									Unit Size (in g)
NCS DC 21001	Serpentinite	5.47	41.37	3.34	0.131	0.012	0.066	0.180	34.25	2.97	8.86				50
Number	Name	TFe	SiO ₂	Al ₂ O ₃	P	Chemical Composition(Percent)									Unit Size (in g)
NCS DC 25002	Chromite	9.71	11.71	10.97	0.0072	0.0017	20.59	0.82	36.31						100
NCS DC 25007	Silicon used in Industry									0.34	0.24	0.39			50
NCS DC 25008	Manganese Ores		9.51	6.81	0.091		0.077	0.071				3.21	45.47	0.087	50
		B													
NCS DC 25008	Manganese Ores	0.0018													
Number	Name	TMn	TFe	SiO ₂	P	Chemical Composition(Percent)									Unit Size (in g)
NCS DC 26701	Manganese ore	44.95	10.50	5.41	0.033	7.53	1.05	0.37	(32.31)	0.010	0.013	0.013	0.008	0.009	50
NCS DC 26702	Manganese ore	48.53	4.93	5.56	0.080	0.37	0.25	3.28	(72.64)	0.102	0.016	0.012	0.014	0.005	50
NCS DC 26703	Manganese ore	58.80	1.45	5.63	0.009	0.37	0.17	0.74	(62.07)	0.025	0.219	0.018	0.0014	0.024	50
NCS DC 26704	Manganese ore	45.2	6.03	5.55	0.127	0.103	0.097	6.88	(67.71)	0.092	0.052	(0.007)	0.096	0.033	50
NCS DC 26705	Ilmenite concentrate		31.40	1.98	0.045	0.16	0.84	0.75							40
NCS DC 26706	Nickel Iron Ore		47.72	5.16	0.0027	0.13	2.34	4.65					0.14		25
		Ni	C	S	TiO ₂	FeO	MnO	V ₂ O ₅	Cr ₂ O ₃	Mn	Cr				
NCS DC 26701	Manganese ore	(0.002)	1.22	0.18											
NCS DC 26702	Manganese ore	0.012	0.085	0.017											
NCS DC 26703	Manganese ore	0.0024	0.034	0.003											
NCS DC 26704	Manganese ore	0.039	0.09	0.028											
NCS DC 26705	Ilmenite concentrate		0.043	0.004	51.35	23.81	0.90	0.22	(0.07)						
NCS DC 26706	Nickel Iron Ore	1.05	0.25	0.12						0.89	2.34				

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	As	(in g)
NCS DC 28002a	Iron ore	60.37	7.40	3.54	0.236	21.03	0.043	0.016	0.751	0.090	0.102	1.23	1.49	0.0012	50
NCS DC 28003a	Iron ore	62.65	4.20	0.39	0.113	24.53	0.011	0.114	0.117	0.040	0.013	4.73	0.71		50
NCS DC 28003b	Iron ore	63.07	3.38	0.64	1.08	23.93	0.016	0.024	0.224	0.025	0.016	4.82	0.71		50
NCS DC 28005a	Iron ore	66.18	2.90	0.54	0.103	27.01	0.0067	0.059	0.077	0.054	0.031	2.64	0.74		50
NCS DC 28005b	Iron ore	67.84	5.32	0.45	0.030	29.72	0.0025	0.106	0.097	0.055	0.018	0.202	0.155		50
NCS DC 28005c	Iron ore	68.38	2.25	0.58	0.086	28.80	0.0035	0.034	0.057	0.050	0.026	1.15	0.78		50
		Cu	Zn	Cr											
NCS DC 28002a	Iron ore	0.0080	0.016	0.068											
NCS DC 28003a	Iron ore	0.0071	0.0085												
NCS DC 28003b	Iron ore		0.055												
NCS DC 28005a	Iron ore	0.0050	0.0070												
NCS DC 28005b	Iron ore		0.0020	0.0075											
NCS DC 28005c	Iron ore	0.0037	0.0055												
Number	Name	Chemical Composition(Percent)													Unit Size
		SiO ₂	Al ₂ O ₃	MnO	P	S	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	Fe ₂ O ₃	SrO	L.O.I	(in g)
NCS DC 28007a	Limestone	0.132	0.045	0.01	0.0014	0.025	0.0041	0.0076	0.0044	0.5	55.31	0.14	0.048	43.7	50
NCS DC 28008a	Limestone	1.07	0.36	0.0061	0.0032	0.004	0.022	0.125	0.006	8.96	44.42	0.3	0.023	44.32	50
NCS DC 28009b	Limestone	2.92	0.473	0.004	0.0029	0.034	0.022	0.28	0.008	4.42	48.69	0.195	0.02	42.85	50
NCS DC 28010a	Limestone	3.42	0.5	0.0047	0.003	0.018	0.022	0.308	0.008	8.08	44.02	0.24	0.018	43.16	50
NCS DC 28011a	Limestone	7.62	1.9	0.02	0.016	0.012	0.097	0.47	0.0083	4.51	44.3	1.01	0.012	39.86	50
Number	Name	Chemical Composition(Percent)													Unit Size
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P	TiO ₂	SrO	K ₂ O	Na ₂ O	S	L.O.I	(in g)
NCS DC 28013a	Dolomite	2.65	31.12	19.1	0.504	0.73	0.011	0.0034	0.034	0.0064	0.13	0.034	0.007	45.49	50
NCS DC 28014a	Dolomite	2.97	31.46	18.6	0.472	0.81	0.012	0.0061	0.041	0.0058	0.29	0.021	0.019	44.94	50
NCS DC 28015a	Dolomite	4.89	33.6	15.5	0.641	1.4	0.0085	0.011	0.074	0.006	0.35	0.019	0.013	43.24	50
Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	Cu	(in g)
NCS DC 28020a	Pellet Ore	63.07	(0.04)	5.22	1.47	1.34	0.96	0.303	0.028	0.258	0.0084	0.078	0.103	0.0089	50
NCS DC 28020b	Pellet Ore	61.81	(0.18)	6.88		1.3	1	0.31	0.032	0.251	0.0055	0.066	0.099	0.0089	50
NCS DC 28020c	Pellet Ore	60.46	0.33	6.12	0.76	0.75	5.15	0.13	0.013	0.154	0.029	0.081	0.036	0.01	50
NCS DC 28023a	Sintered Ore	53.1	7.49	6.49	2.76	11.78	2.69	0.74	0.059	0.144	0.042	0.079	0.049		50
NCS DC 28023c	Sintered Ore	53.96	8.2	5.72	1.08	13.5	3.24		0.018	0.064	0.062	0.05	0.041	0.0062	50
		Zn	V	As	Pb	Cr	C	Co	Mn						
NCS DC 28020a	Pellet Ore	0.012													
NCS DC 28020b	Pellet Ore	0.012	0.155												
NCS DC 28020c	Pellet Ore	0.012													
NCS DC 28023a	Sintered Ore														
NCS DC 28023c	Sintered Ore	0.0075	0.0058	0.0027	0.0008	0.0036	0.056	0.0033	0.073						
Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	Cu	(in g)
NCS DC 28046a	Sintered Ore	55.49	7.93	4.85	1.84	11.66	2.83	0.289	0.045	0.109	0.04	0.045	0.034	0.0034	50
		Zn													
NCS DC 28046a	Sintered Ore	0.0078													

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	Ni	Cr	Co	TiO ₂	Mn	P	S	
NCS DC 28064	High Cr, Ni Iron ore	51.48	0.25	2.30	5.65	0.014	0.70	0.72	1.80	0.10	0.15	0.70	0.0045	0.17	50
NCS DC 28065	High Cr, Ni Iron ore	39.68	0.10	10.00	9.98	0.30	2.54	1.30	1.71	0.085	0.14	0.59	0.010	0.23	50
NCS DC 28067	High Cr, Ni Iron ore	51.36	0.26	3.11	4.16	0.022	1.05	0.94	2.00	0.098	0.091	0.80	0.0055	0.095	50
NCS DC 28068	High Cr, Ni Iron ore	16.83	0.10	34.93	2.06	0.16	21.32	1.74	0.81	0.064	0.043	0.40	0.0018	0.025	50
NCS DC 28069	High Cr, Ni Iron ore	34.18	0.11	18.28	2.39	0.12	12.12	1.50	1.48	0.13	0.030	0.78	0.0015	0.082	50
NCS DC 28070	High Cr, Ni Iron ore	19.43	10.20	28.78	7.10	20.02	11.58	1.07	0.81	0.055	0.24	0.50	0.024	0.35	50
NCS DC 28071	High Cr, Ni Iron ore	25.15	20.15	29.18	6.68	11.80	12.48	1.41	1.16	0.066	0.17	0.54	0.017	0.22	50
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		S	Ni	Ti	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	Cr	Cu	Mn	Co	Zn	
NCS DC 28072	Nickel ore	2.51	5.71	0.15	23.73	21.1	3.91	6.47	1.14	0.015	0.27	0.037	0.042	4.65	50
NCS DC 28073	Nickel ore	0.024	1.17	0.024	18.57	37.41	2.9	0.82	20.75	0.95	0.0049	0.327	0.042	0.019	50
NCS DC 28074	Nickel ore	0.288	0.892	0.145	46.99	2.52	10.29	0.033	0.51	1.84	0.012	0.149	0.014	0.023	50
NCS DC 28075	Nickel ore	0.014	1.7	0.039	14.92	38.77	2	0.385	21.05	0.8	0.0025	0.294	0.043	0.019	50
NCS DC 28076	Nickel ore	0.016	1.86	0.015	15.2	34.7	1.04	0.1	25.7	0.92	0.0017	0.282	0.065	0.021	50
NCS DC 28077	Nickel ore	0.016	1.97	0.017	14.84	36	1.03	0.14	25.49	0.823	0.0016	0.263	0.06	0.021	50
NCS DC 28078	Nickel ore	0.034	2.18	0.027	14.89	39.2	1.59	0.46	21.28	0.76	0.0058	0.254	0.055	0.079	50
NCS DC 28079	Nickel ore	1.41	3.98	0.098	20.74	27.48	3.55	4.54	8.67	0.364	0.169	0.147	0.041	2.85	50
NCS DC 28080	Nickel ore	0.18	1.3	0.092	34.55	15.48	6.53	0.07	10.54	1.38	0.0071	0.192	0.033	0.022	50
		Pb	P	Cd											
NCS DC 28072	Nickel ore	0.04	1.61	0.047											
NCS DC 28073	Nickel ore	0.0024	<0.007	<0.0015											
NCS DC 28074	Nickel ore	0.0023	0.03	<0.0020											
NCS DC 28075	Nickel ore	0.0013	0.0043	<0.0015											
NCS DC 28076	Nickel ore	0.0016	<0.007	<0.0015											
NCS DC 28077	Nickel ore	0.0015	0.0043	<0.0015											
NCS DC 28078	Nickel ore	0.002	0.029	<0.0015											
NCS DC 28079	Nickel ore	0.03	1.08	0.028											
NCS DC 28080	Nickel ore	0.0019	0.02	<0.0025											
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	As	
NCS DC 28081	Iron ore	57.41	1.89	7.31	5.11	0.34	0.142	0.228	0.054	0.23	0.018	0.15	0.045	0.0014	50
NCS DC 28082	Iron ore	49.53	0.05	7.44	7.45	0.032	0.107	3.39	0.083	0.370	0.029				50
NCS DC 28082a	Iron ore	48.00	0.05	12.74	3.44	0.15	0.268	3.40	0.076	0.146	0.111				50
NCS DC 28082b	Iron ore	51.98	0.15	9.35	3.4	0.27	0.27		0.068	0.093	0.041	0.304	0.076	0.011	50
NCS DC 28083	Iron ore	50.98	8.92	9.40	5.03		1.05	0.306	0.963	0.125	0.112				50
NCS DC 28091	Iron ore	44.95	0.2	13.18	3.81	4.02	1.53		0.08	0.139	0.122	0.421	0.141	0.0095	50
NCS DC 28092	Iron ore	52.85	14.34	14.13	2.76	2.38	1.77		0.049	0.635	0.144	0.333	0.33	0.0033	50
NCS DC 28093	Iron ore	60.15	14.74	5.34	1.2	2.23	2.63		0.14	0.082	0.271	0.13	0.109	0.0028	50
NCS DC 28094	Iron ore	54.41	3.19	8.1	2.7	0.88	0.98		0.09	0.092	0.108	0.25	0.086	0.0089	50
NCS DC 28095	Iron ore	58.67	14.71	7.09	1.51	2.29	2.42		0.12	0.198	0.247	0.172	0.151	0.0031	50
		Cu	Zn	Cr	C	Pb	V	Co	Mn						
NCS DC 28081	Iron ore	0.0038	0.0027	0.032											
NCS DC 28082	Iron ore				0.071										
NCS DC 28082a	Iron ore		0.49		0.072	0.283									
NCS DC 28082b	Iron ore	0.037	0.028	0.0036	0.203	0.02	0.0073	0.0041	1.12						
NCS DC 28083	Iron ore				0.89										
NCS DC 28091	Iron ore	0.062	0.015	0.0056	1.05	0.0073	0.012	0.0052	1.54						
NCS DC 28092	Iron ore	0.014	0.034	0.027	0.474	0.0056	0.087	0.0044	0.248						
NCS DC 28093	Iron ore	0.01	0.0026	0.0013	0.46	0.0005	0.036	0.0073	0.047						
NCS DC 28094	Iron ore	0.03	0.02	0.0029	0.278	0.014	0.015	0.0051	0.8						
NCS DC 28095	Iron ore	0.011	0.0089	0.0072	0.457	0.0015	0.045	0.0067	0.085						

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		TFe	FeO	SiO ₂	CaO	MgO	Al ₂ O ₃	Ti	Mn	P	S	K ₂ O	Na ₂ O	Cu		
NCS DC 28024	Iron Ore	61.53	0.24	3.43	0.118	0.109	2.12	0.052	0.276	0.068	0.038	0.026	0.034	0.0014	50	
NCS DC 28025	Iron Ore	62.11	0.58	2.92	0.021	0.101	2.06	0.051	0.65	0.067	0.013	0.023	0.013	0.0018	50	
NCS DC 28026	Iron Ore	62.27	0.59	4.2	0.144	0.156	2.39	0.055	0.17	0.078	0.02	0.023	0.024	0.0015	50	
NCS DC 28027	Iron Ore	66.34	0.07	1.02	0.02	0.063	1.42	0.057	0.48	0.034	0.0071	0.013	0.0055	0.0085	50	
NCS DC 28028	Iron Ore	66.47	0.58	1.79	0.028	0.091	1.36	0.046	0.137	0.055	0.0066	0.014	0.005	0.0014	50	
NCS DC 28029	Iron Ore	72.01	28.63	0.158	0.025	0.042	0.095	0.028	0.043	0.0013	0.0028	0.0068	0.0008	0.0007	70	
NCS DC 28030	Iron Ore	60.82	0.21	3.45	0.035	0.112	2.27	0.056	0.298	0.073	0.041	0.022	0.026		70	
NCS DC 28031	Iron Ore	61.82	0.55	2.94	0.024	0.085	2.26	0.054	0.61	0.073	0.012	0.024	0.012		70	
NCS DC 28032	Iron Ore	68.29	0.24	0.85	0.074	0.025	0.74	0.050	0.096	0.028	0.0028	0.0063	0.015		70	
NCS DC 28034	Iron Ore	53.42	15.27	5.22	0.31	11.21	0.57	0.044	0.065	0.018	0.192	0.086	0.25		70	
NCS DC 28035	Iron Ore	65.66	0.54	1.92	0.056	0.102	1.64	0.048	0.135	0.060	0.022	0.018	0.007		70	
NCS DC 28036	Iron Ore	59.71	0.62	5.18	0.317	0.233	2.76	0.066	0.192	0.078	0.090	0.042	0.086		70	
NCS DC 28037	Iron Ore	66.54	0.21	0.962	0.031	0.054	1.43	0.051	0.482	0.034	0.0071	0.012	0.015		70	
NCS DC 28038	Iron Ore	55.19	6.23	6.79	9.19	2.22	1.83	0.123	0.222	0.057	0.028	0.070	0.057		70	
NCS DC 28039	Iron Ore	72.02	28.78	0.14	0.026	0.043	0.095	0.029	0.043	0.0016	0.0030	0.0064	0.0008		70	
NCS DC 28040	Iron Ore	58.04	3.11	5.06	4.41	1.17	2.04	0.084	0.269	0.063	0.038	0.048	0.039		70	
NCS DC 28041	Manganese Ores	0.85		56.03	2.07	0.6	8.25			0.011	0.012	3.74	0.48		50	
NCS DC 28042	Manganese Ores	10.62		24.73	6.2	3.14	2.8			0.074	0.044	0.83	0.049		50	
NCS DC 28043	Manganese Ores	10.68		17.3	1.15	0.7	6.4			0.171	0.1	0.65	0.058		50	
NCS DC 28044	Manganese Ores	6.9		17.7	3.3	1.29	2.08			0.105	0.021	0.49	0.076		50	
NCS DC 28045	Manganese Ores	2.75		16	0.195	0.182	2.35			0.23	0.0086	1.48	0.034		50	
		Co	As	Pb	Cr	Zn	B ₂ O ₃	TMn	MnO ₂	TiO ₂	BaO	Ni	V			
NCS DC 28024	Iron Ore	0.0009	0.0011	0.0008	0.0054	0.002										
NCS DC 28025	Iron Ore	0.0015	0.0011	0.0008	0.0038	0.0026										
NCS DC 28026	Iron Ore	0.001	0.0013	0.0004	0.0027	0.0026										
NCS DC 28027	Iron Ore	0.0009	0.0004	0.0013	0.0015	0.0032										
NCS DC 28028	Iron Ore	0.0008	0.0012	0.0013	0.003	0.0044										
NCS DC 28029	Iron Ore	0.0008	0.00012	0.0002	0.0062	0.0026										
NCS DC 28034	Iron Ore						3.62									
NCS DC 28041	Manganese Ores		0.013	0.0025		0.015		14.45	20.66	0.177	0.064					
NCS DC 28042	Manganese Ores		0.032	0.0066	0.0023	0.012		22.18	18.35	0.123	0.164	0.0044	0.0044			
NCS DC 28043	Manganese Ores		0.089	0.11	0.013	0.235		30.99	45.61	0.215	1.11	0.083	0.019			
NCS DC 28044	Manganese Ores		0.039	0.0083	0.0018	0.027		36.31	45.01	0.085	0.41	0.01	0.0075			
NCS DC 28045	Manganese Ores		0.042	0.011	0.038	0.07		44.97	67.67	0.105	0.058	0.079	0.018			
Number	Name	Chemical composition(percent)													Unit Size (in g)	
		TFe	SiO ₂	Sb	S	Cu	MgO	As	Pb	Zn	Bi	Ag	WO ₃	Sn		
NCS DC 35001	Tin Concentrate	21.33		0.024	0.183			0.574	2.89	0.264	0.034	0.00255		45.80	100	
NCS DC 35002	Tin Concentrate	9.53	0.930	0.016	0.090	0.043		0.306	1.62	0.120	0.020		0.182	62.49	100	
NCS DC 35008	Tin Ore	22.62		0.013		0.037		0.084	2.07	0.51		19.8(g/t)		0.125	60	
NCS DC 35011	Sn Ore					0.077		0.046							70	
NCS DC 35012	Sn Ore					0.109		0.097							70	
NCS DC 35014	Tin Concentrate		(1.10)	0.019		0.067	(0.13)	0.414	2.20	0.196	0.028				100	
NCS DC 35015	Manganese Ore	3.97				0.006		0.015	0.015	0.0036					80	
		Fe	Ni	Co	MnO ₂	TMn										
NCS DC 35014	Tin Concentrate	14.77														
NCS DC 35015	Manganese Ore		0.014	0.025	68.28	49.00										
Number	Name	Chemical composition(percent)													Unit Size (in g)	
		Zn	Pb	Fe	Cd	As	SiO ₂	CaO	MgO							
NCS DC 35017	Zinc Concentrate	46.93	1.69	0.432	0.199	0.013	6.65	2.65	1.46							50

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	Mn	Ti	P	S	K ₂ O	Na ₂ O	
NCS DC 28046	Sintered Ore	56.14	9.17	5.54	2.07	10.35	2.21	0.227	0.076	0.064	0.032	0.125	0.048	70
NCS DC 28047	Sintered Ore	50.04	8.07	7.6	2.11	13.72	2.08	0.39	0.067	0.028	0.125	0.091	0.53	70
NCS DC 28048	Sintered Ore	54.16	8.52	6.04	2.23	10.93	3.05	0.21	0.075	0.068	0.052	0.076	0.19	70
NCS DC 28049	Sintered Ore	52.16	8.06	6.92	2.17	13.05	1.63	0.44	0.067	0.024	0.096	0.082	0.38	70
NCS DC 28050	Sintered Ore	53.26	9.53	6.24	2.24	11.31	2.7	0.286	0.082	0.049	0.075	0.084	0.44	70
NCS DC 28051	Pellet Iron Ore	63.56	0.35	4.57	0.926	1.12	1.48	0.134	0.071	0.018	0.015	0.13	0.07	70
NCS DC 28052	Pellet Iron Ore	64.53	0.28	5.65	0.77	0.3	0.32	0.075	0.122	0.025	0.0053	0.038	0.054	70
NCS DC 28053	Pellet Iron Ore	61.68	0.24	10.32	0.84	0.33	0.38	0.042	0.063	0.017	0.02	0.071	0.046	70
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Cu	S	MgO	As	Zn	Pb	Ag(g/t)	Sb	Au(g/t)	Fe	Mn	Cd	Ni
NCS DC 28054	Copper Ore	6.78	0.082	12.51	0.209	0.456	0.106	126.1		0.05	15.39	0.124	0.0021	<0.005
NCS DC 28055	Copper Ore	12.79	1.54	0.18	4.68	0.64	0.037	85.9	0.25	0.04	3.22	0.11	0.0067	0.017
NCS DC 28056	Copper Ore	8.46	0.86	7.04	2.14	0.503	0.087	109.9	0.22	0.05	10.44	0.169	0.0064	0.011
NCS DC 28057	Copper Concentrate	10.71	25.05	4.01	0.034	0.052	0.019	12		6.16	29.34	0.084	<0.001	0.072
NCS DC 28058	Copper Concentrate	20.56	22.87	7.63	0.012	0.194	0.015	17.1		4.68	24.7	0.013	<0.001	0.093
NCS DC 28059	Copper Concentrate	16.6	23.92	5.81	0.02	0.131	0.017	14.8		5.1	26.39	0.044	<0.001	0.082
		F	Bi											
NCS DC 28054	Copper Ore	1.15	0.283											
NCS DC 28055	Copper Ore	0.028	0.023											
NCS DC 28056	Copper Ore	0.53	0.19											
NCS DC 28057	Copper Concentrate	0.036												
NCS DC 28058	Copper Concentrate	0.056												
NCS DC 28059	Copper Concentrate	0.052												
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TMn	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	S	P	MnO ₂		
NCS DC 28060	Manganese Ore	18.22	5.86	38.94	10.39	1.22	0.84	2.34	0.054	0.025	0.082	27.06		50
NCS DC 28061	Manganese Ore	22.93	6.71	31.42	9.88	1.11	0.94	1.95	0.053	0.23	0.073	33.45		50
NCS DC 28062	Manganese Ore	34.67	8.05	10.7	9.97	0.48	0.87	1.14	0.063	0.011	0.05	51.64		50
NCS DC 28063	Manganese Ore	27.45	8.1	20.96	10.05	0.99	1.16	1.57	0.064	0.6	0.059	39.38		50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		CaF ₂	SiO ₂	CaCO ₃	Fe ₂ O ₃	S	P	K ₂ O	Na ₂ O	MgO	Al ₂ O ₃	Mn		
NCS DC 28084	Fluorspar	46.59	28.89	9.08	0.52	0.071	0.0071	0.34	0.061	5.51	0.99	0.051		50
NCS DC 28085	Fluorspar	60.16	27.17	3.73	1.32	0.52	0.021	0.41	0.067	1.99	1.29	0.034		50
NCS DC 28086	Fluorspar	73.73	19.27	2.06	0.87	0.28	0.023	0.38	0.054	0.73	1.07	0.027		50
NCS DC 28087	Fluorspar	83.12	13.74	1.06	0.36	0.05	0.018	0.28	0.031	0.14	0.69	0.0099		50
NCS DC 28088	Fluorspar	96.87	1.76	0.14	0.173	0.092	0.015	0.036	0.019	0.015	0.14	0.04		50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P ₂ O ₅	TiO ₂	SrO	K ₂ O	Na ₂ O	S	L.O.I
NCS DC 28089	Magnesite	4.13	1.52	43.45	1.74	1.14	0.095	0.036	0.041	0.0013	0.037	0.018	0.015	47.35
NCS DC 28089a	Magnesite	4.95	1.26	43.44	1.66	1.46	0.083	0.037	0.048	0.0014	0.044	0.02	0.015	46.57
NCS DC 28090	Magnesite	0.32	0.53	46.4	0.65	0.1	0.016	0.013	0.006	0.0005	0.005	0.017	0.0027	51.58
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TiO ₂	TFe	FeO	SiO ₂	CaO	MgO	Al ₂ O ₃	MnO	S	P ₂ O ₅	K ₂ O	Na ₂ O	Cr ₂ O ₃
NCS DC28096	Titanium concentrate	14.12	50.2	24.52	6.88	0.7	2.45	3.29	0.52	0.089	0.144	0.052	1.09	0.058
NCS DC28097	Titanium concentrate	45.1	33.49	36.43	2.97	1.17	1.53	1.79	0.68	1.13	0.188	0.025	0.053	0.051
NCS DC28098	Titanium concentrate	36.78	34.87	35.49	6.78	1.13	2.92	3.2	0.65	0.39	0.22	0.079	0.11	0.079
NCS DC28099	Titanium concentrate	25.78	27.53	24.22	16.25	4.5	2.34	6.28	0.46	2.21	1.82	0.24	1.52	0.079
NCS DC28100	Titanium concentrate	44.93	32.9	18.52	2.34	1.1	0.79	1.44	1.01	0.011	0.25	0.06	0.033	1.96
		V ₂ O ₅	Cu	Ni	C									
NCS DC28096	Titanium concentrate	0.5	0.0059	0.009	0.18									
NCS DC28097	Titanium concentrate	0.086	0.016	0.022	0.32									
NCS DC28098	Titanium concentrate	0.136	0.0047	0.015	0.26									
NCS DC28099	Titanium concentrate	0.14	0.033	0.048	0.37									
NCS DC28100	Titanium concentrate	0.2	0.0041	0.0081	0.037									

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		S	Pb	Cu	Zn	TFe	As	Ag(g/t)	SiO ₂	Al ₂ O ₃	MgO	CaO	
NCS DC28178	Lead Concentrate	3.94	42.84	0.35	1.53	15.38	0.816	933	6.55	2.01	0.412	1.73	25
NCS DC28179	Lead Concentrate	15.71	57.44	0.29	2.33	3.08	0.019	240	3.52	1.13	0.374	4.86	25
NCS DC28180	Lead Concentrate	14.22	73.42	0.058	2.68	1.7	0.0013	250	1.81	0.54	0.042	0.3	25
		Mn	Cd										
NCS DC28178	Lead Concentrate	0.345	0.005										
NCS DC28179	Lead Concentrate	0.427	0.019										
NCS DC28180	Lead Concentrate	0.57	0.022										
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		St	Sa	As	F	Pb	Zn	Co					
NCS DC28181-1	Pyrites and Pyrites concentrate	39.52	38.74	7.8	0.064	0.712	0.075						5
NCS DC28181-2	Pyrites and Pyrites concentrate	19.68	17.25	0.018	0.055	<0.005	0.014	0.377					5
NCS DC28181-3	Pyrites and Pyrites concentrate	29.95	29.16	0.267	0.068	0.225	0.106						5
NCS DC28181-4	Pyrites and Pyrites concentrate	35.21	34.48	4.96	0.06	0.479	0.088						5
NCS DC28181-5	Pyrites and Pyrites concentrate	28.38											5
NCS DC28181-6	Pyrites and Pyrites concentrate	28.4	47.24	0.3	0.036	0.469	1.61	0.034					5
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Mo	F	C	S	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	K ₂ O	Na ₂ O	
NCS DC28182	Molybdenum Ore	0.24	0.14	0.23	1.74	72.6	9.76	2.93	0.91	1.41	4.71	1.34	50g
NCS DC28183	Molybdenum concentrate	45.34	0.17	0.62	35.5	8.35	1.52	5.62	0.25	0.91	0.4	0.068	50g
NCS DC28184	Molybdenum concentrate	54.29	0.034	0.35	36.88	4.52	1.35	0.964	0.16	0.43	0.18	0.078	50g
NCS DC28185	Molybdenum Ore	2.04	0.14	0.24	3	71.32	9.53	3.08	0.86	1.52	4.43	1.28	50g
NCS DC28186	Molybdenum Ore	5.67	0.14	0.27	5.73	66.5	8.69	3.29	0.83	1.42	4.27	1.22	50g
		W	P	As	Cu	Pb	Zn	Co	Ni	Sn	Cr	TiO ₂	Mn
NCS DC28182	Molybdenum Ore	0.0019	0.038	0.0054	0.312	<0.008	0.011	0.0011	0.0012	0.0014	0.0008	0.212	0.036
NCS DC28183	Molybdenum concentrate	0.0046	0.013	0.004	0.354	0.432	0.088	0.0014	0.0016	<0.004	0.0029	0.048	0.03
NCS DC28184	Molybdenum concentrate	0.0071	0.0044	0.0075	0.251	0.057	0.018	0.001	<0.0020	0.0013	0.0006	0.019	0.0064
NCS DC28185	Molybdenum Ore	0.0019	0.034	0.0049	0.322	0.016	0.014	0.0008	0.0008	0.0013	0.0018	0.237	0.037
NCS DC28186	Molybdenum Ore	0.0019	0.036	0.0049	0.329	0.032	0.019	0.0011	0.0006	0.0011	0.0015	0.21	0.032
		Re	Bi	Sb									
NCS DC28183	Molybdenum concentrate	0.0022	0.029	0.0004									
NCS DC28184	Molybdenum concentrate	0.0022	0.0008	0.0002									
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Cu	Au(g/t)	Ag(g/t)	S	CaO	MgO	SiO ₂	Al ₂ O ₃	K ₂ O	Na ₂ O	F	
NCS DC28187	Copper Concentrate	22.5	15	21	33.81	0.56	2.05	3.72	0.27	0.015	0.008	0.012	50
NCS DC28188	Copper Concentrate	31.05	9	330	24.52	4.54	1.04	8.17	0.72	0.081	0.054	0.012	50
NCS DC28189	Copper Concentrate	9.88	9	141	24.91	1.93	0.77	14.03	5.11	1.44	0.19	0.044	50
NCS DC28190	Copper Concentrate	16.92	10	186	38	0.38	0.46	3.73	1.32	0.38	0.045	0.012	50
NCS DC28191	Copper Concentrate	20.12	10	17	24.62	1.41	6.4	12.53	0.49	0.037	0.025	0.028	50
NCS DC28192	Copper Concentrate	24.4	12	181	31.22	2.1	1.27	5.28	0.71	0.13	0.036	0.012	50
		Fe	Mn	Pb	Zn	Cd	Ni	Co	As	Bi	Sb	Hg(μg/g)*	
NCS DC28187	Copper Concentrate	31.37	0.013	0.011	0.45	0.0003	0.19	0.24	0.007	0.0004	0.0006	0.3	
NCS DC28188	Copper Concentrate	22.19	0.027	0.15	0.075	0.001	0.008	0.012	0.024	0.11	0.003	1.4	
NCS DC28189	Copper Concentrate	25.18	0.14	0.26	0.069	0.0005	0.006	0.008	0.018	0.038	0.003	0.2	
NCS DC28190	Copper Concentrate	34.12	0.068	0.13	0.034	0.0002	0.009	0.013	0.011	0.061	0.0005	0.1	
NCS DC28191	Copper Concentrate	26.02	0.023	0.012	0.5	0.0002	0.13	0.14	0.007	0.0003	0.0003*	0.3	
NCS DC28192	Copper Concentrate	28.46	0.032	0.097	0.2	0.0005	0.074	0.096	0.013	0.052	0.0015	1.3	

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		Chemical Composition(g/T)													Unit Size	
Number	Name	Au	Ag												(in g)	
NCS DC 28101	Gold ore	1.7	4.2												500	
NCS DC 28102	Gold ore	2.5	2.2												500	
NCS DC 28103	Gold ore	1.8	3.1												500	
NCS DC 28104	Gold ore	63.4	62.2												250	
NCS DC 28105	Gold ore	5	5.8												500	
NCS DC 28106	Gold ore	11	11												500	
NCS DC 28107	Gold ore	20	20.4												250	
		Chemical Composition(Percent)													Unit Size	
Number	Name	TFe	FeO	SiO ₂	S	P	Ti	TiO ₂	Al ₂ O ₃	MgO	K ₂ O	Na ₂ O	Mn	Cu	(in g)	
NCS DC 28108	MAGNETIC IRON ORE	46.93	19.95	14.75	0.637	0.039	0.067	0.112	2.05	5.54	0.33	0.22	0.058	0.119	70	
NCS DC 28109	MAGNETIC IRON ORE	66.52	27.91	3.26	0.064	0.0062	0.037	0.061	0.62	1.96	0.091	0.032	0.07	0.01	70	
NCS DC 28110	MAGNETIC IRON ORE	62.63	23.21	3.15	0.255	0.017	0.096	0.16	1.19	5.21	0.068	0.023	0.17	0.018	70	
NCS DC 28111	MAGNETIC IRON ORE	50.94	20.67	13.83	0.43	0.033	0.065	0.108	1.42	3.95	0.204	0.14	0.098	0.305	70	
NCS DC 28112	MAGNETIC IRON ORE	56.23	24.15	7.81	0.369	0.023	0.62	1.03	1.39	4.89	0.133	0.07	0.132	0.527	70	
NCS DC 28113	MAGNETIC IRON ORE	64.42	27	3.56	0.381	0.011	0.315	0.522	0.9	3.28	0.099	0.034	0.109	0.047	70	
NCS DC 28114	MAGNETIC IRON ORE	65.71	27.14	2.07	0.158	0.013	0.418	0.697	0.83	3.33	0.048	0.015	0.127	0.016	70	
NCS DC 28115	MAGNETIC IRON ORE	68.29	28.25	2.08	0.041	0.0047	0.034	0.057	0.43	1.25	0.06	0.021	0.061	0.0065	70	
NCS DC 28116	LEAD ORE	6.78		7.92	19.26				2.56	1.28			0.029	0.85	25	
		Zn	As	CaO	Pb	Ag	Cd	Sb	Bi							
NCS DC 28108	MAGNETIC IRON ORE	0.0038		7.12												
NCS DC 28109	MAGNETIC IRON ORE	0.0052		1.1												
NCS DC 28110	MAGNETIC IRON ORE	0.01		1.09												
NCS DC 28111	MAGNETIC IRON ORE	0.017	0.083	4.85												
NCS DC 28112	MAGNETIC IRON ORE	0.037	0.167	2.73												
NCS DC 28113	MAGNETIC IRON ORE	0.0096	0.013	1.06												
NCS DC 28114	MAGNETIC IRON ORE	0.008		0.72												
NCS DC 28115	MAGNETIC IRON ORE	0.0037		0.7												
NCS DC 28116	LEAD ORE	1.44	0.068	17.16	15.09	0.022	0.0097	0.0084	0.085							
		Chemical Composition(Percent)													Unit Size	
Number	Name	St,d	Ad	Vd	SiO ₂	Fe ₂ O ₃	CaO	MgO	Al ₂ O ₃	TiO ₂	MnO	K ₂ O	Na ₂ O	P ₂ O ₅	(in g)	
NCS DC 28117	Graphite	0.17	3.47	1.33	1.76	0.46	0.19	0.18	0.63	0.014	0.005	0.17	0.009	0.004	50	
NCS DC 28118	Graphite	0.49	11.45	1.87	5	1.98	0.91	1	1.92	0.085	0.021	0.19	0.088	0.007	50	
NCS DC 28119	Graphite	0.02	29	2.88	15.66	2.09	0.23	0.55	8.13	0.44	0.032	1.33	0.28	0.087	50	
NCS DC 28120	Graphite Ore	1.06	95.62	2.22	52.73	5.34	11.81	8.79	10.93	0.39	0.048	2.39	1.5	0.083	50	
NCS DC 28121	Graphite Ore	0.99	90.65	2.48	50.28	5	11.12	8.43	10.72	0.36	0.047	2.32	1.38	0.083	50	
		Chemical Composition(Percent)													Unit Size	
Number	Name	TFe	TiO ₂	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	V ₂ O ₅	Cr ₂ O ₃	FeO	MnO	Ni	(in g)	
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	56.26	14.48	1.72	2.73	0.42	2.22	0.014	0.061	0.56	0.076	29.22	0.546	0.0058	70	
NCS DC 28123	Vanadium-titanium-Magnetic Iron Ore	54.89	9.63	7.44	1.20	4.06	0.83	0.203	0.081	0.251	0.018	26.56	0.331	0.0041	70	
NCS DC 28124	Vanadium-titanium-Magnetic Iron Ore	55.23	11.71	5.15	1.80	2.54	1.42	0.118	0.074	0.368	0.040	27.48	0.421	0.0044	70	
NCS DC 28125	Vanadium-titanium-Magnetic Iron Ore	50.16	13.92	7.16	3.33	1.69	2.78	0.015	0.080	0.623	0.068	26.05	0.50	0.0063	70	
NCS DC 28126	Vanadium-titanium-Magnetic Iron Ore	58.18	12.24	1.59	2.18	0.366	1.90	0.016	0.052	0.834	0.055	29.06	0.481	0.0053	70	
NCS DC 28127	Vanadium-titanium-Magnetic Iron Ore	52.26	10.32	8.10	2.98	1.88	2.50	0.014	0.092	0.715	0.040	25.80	0.411	0.0058	70	
		Cu	Co	Zn												
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	0.0048	0.010	0.061												
NCS DC 28123	Vanadium-titanium-Magnetic Iron Ore	0.0070	0.0066	0.0085												
NCS DC 28124	Vanadium-titanium-Magnetic Iron Ore	0.0061	0.010	0.028												
NCS DC 28125	Vanadium-titanium-Magnetic Iron Ore	0.0065	0.015	0.055												
NCS DC 28126	Vanadium-titanium-Magnetic Iron Ore	0.0042	0.015	0.050												
NCS DC 28127	Vanadium-titanium-Magnetic Iron Ore	0.0058	0.012	0.040												

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		Cr ₂ O ₃	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	Ti	V	Mn	Ni	K ₂ O		
NCS DC 28128	Chromite Ore	27.55	9.76	12.55	18.94	1.27	20.48	0.035	0.0029	0.145	0.077	0.114	0.169	0.043	50	
NCS DC 28129	Chromite Ore	33.00	12.90	12.19	13.94	1.00	17.27	0.021	0.0030	0.136	0.089	0.180	0.162	0.035	50	
NCS DC 28130	Chromite Ore	46.74	20.34	0.79	14.53	0.053	9.79	0.003	0.0027	0.373	0.215	0.156	0.092	0.014	50	
NCS DC 28131	Chromite Ore	45.10	19.66	2.93	13.70	0.18	10.37	0.0029	0.0033	0.344	0.207	0.150	0.094	0.015	50	
NCS DC 28132	Chromite Ore	36.50	14.83	7.70	16.22	0.69	15.32	0.022	0.0028	0.244	0.143	0.133	0.134	0.033	50	
NCS DC 28133	Chromite Ore	40.20	16.74	4.73	15.97	0.46	13.41	0.017	0.0037	0.294	0.162	0.142	0.121	0.023	50	
		Co	Zn													
NCS DC 28128	Chromite Ore	0.016	0.049													
NCS DC 28129	Chromite Ore	0.027	0.102													
NCS DC 28130	Chromite Ore	0.025	0.071													
NCS DC 28131	Chromite Ore	0.025	0.065													
NCS DC 28132	Chromite Ore	0.022	0.058													
NCS DC 28133	Chromite Ore	0.022	0.065													
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		TFe	TiO ₂	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	V ₂ O ₅	Cr ₂ O ₃	FeO	MnO	Ni		
NCS DC 28134	Titanium Ore	14.85	7.11	38.43	8.67	12.39	6.33	0.196	0.883	0.062	0.0084	12.45	0.216	0.0037	50	
NCS DC 28135	Titanium Ore	15.07	6.14	42.61	8.82	9.87	6.78	0.021	0.232	0.092	0.0095	12.77	0.187	0.0098	50	
NCS DC 28136	Titanium Ore	26.50	27.23	14.41	2.31	9.49	2.34	4.77	1.07	0.066	0.0078	23.62	0.802	0.013	50	
NCS DC 28137	Titanium Ore	30.31	40.66	9.21	1.35	4.78	1.30	1.52	0.117	0.068	0.0064	33.33	1.20	0.0084	50	
NCS DC 28138	Titanium Ore	34.79	47.82	2.65	0.68	0.68	2.11	0.184	0.0076	0.095	0.014	39.14	0.652	0.0029	50	
NCS DC 28139	Titanium Ore	22.04	55.68	1.54	2.30	0.070	1.09	0.025	0.047	0.266	2.80	9.15	1.26	0.0007	50	
NCS DC 28140	Titanium Ore	33.02	45.73	4.85	0.95	2.23	1.68	0.74	0.048	0.203	0.012	36.68	0.882	0.0051	50	
NCS DC 28141	Titanium Ore	33.58	45.61	4.16	0.867	1.65	1.74	0.536	0.047	0.188	0.0067	37.51	0.799	0.0046	50	
NCS DC 28142	Titanium Ore	30.23	50.06	2.04	1.30	0.68	1.52	0.172	0.048	0.700	0.84	28.85	0.875	0.0021	50	
NCS DC 28143	Titanium Ore	29.29	35.60	10.41	1.65	6.25	1.55	2.76	0.476	0.505	0.0077	29.34	1.02	0.011	50	
		Cu	Co	Zn												
NCS DC 28134	Titanium Ore	0.0082	0.0052	0.019												
NCS DC 28135	Titanium Ore	0.016	0.0079	0.018												
NCS DC 28136	Titanium Ore	0.038	0.015	0.015												
NCS DC 28137	Titanium Ore	0.022	0.010	0.014												
NCS DC 28138	Titanium Ore	0.0056	0.0087	0.016												
NCS DC 28139	Titanium Ore	0.0093	0.0026	0.017												
NCS DC 28140	Titanium Ore	0.013	0.051	0.016												
NCS DC 28141	Titanium Ore	0.011	0.0098	0.015												
NCS DC 28142	Titanium Ore	0.0073	0.011	0.017												
NCS DC 28143	Titanium Ore	0.027	0.013	0.016												
Number	Name	Chemical Composition(g/T)													Unit Size (in g)	
		CaO	MgO	Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	MnO	S	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	L.O.I			
NCS DC 28144	Potassium Feldspar	1.05	0.329	1.04	69.12	13.84	0.03	0.584	0.02	3.84	4.72	0.089	1.61	50		
NCS DC 28145	Potassium Feldspar	5.77	3.39	0.88	59.33	12.14	0.026	0.41	0.017	3.46	4.05	0.071	8.13	50		
Number	Name	Chemical Composition(g/T)													Unit Size (in g)	
		CaF ₂	SiO ₂	CaCO ₃	Fe ₂ O ₃	S	P	K ₂ O	Na ₂ O	MgO	Al ₂ O ₃	MnO	TiO ₂			
NCS DC 28146	Fluorspar	94.39	4.65	0.14	0.28	0.13	0.0036	0.012	0.006	0.003	0.113	0.005	0.0019	50		
NCS DC 28147	Fluorspar	90.28	8.34	0.15	0.34	0.155	0.0041	0.064	0.008	0.0049	0.317	0.0046	0.003	50		
NCS DC 28148	Fluorspar	96.31	3	0.17	0.163	0.025	0.0043	0.014	0.008	0.0022	0.09	0.0024	(0.001)	50		
NCS DC 28149	Fluorspar	87.45	10.03	0.21	0.38	0.198	0.0052	0.153	0.009	0.012	0.63	0.0049	0.0054	50		
NCS DC 28150	Fluorspar	80.3	15.52	0.25	0.47	0.184	0.0076	0.57	0.03	0.03	1.69	0.0094	0.014	50		
NCS DC 28151	Fluorspar	79.24	15.8	0.98	0.59	0.103	0.011	0.54	0.078	0.096	1.71	0.044	0.025	50		

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Number	Name	Chemical Composition(g/T)													Unit Size (in g)	
		CaO	MgO	Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	MnO	S	P	K ₂ O	Na ₂ O	SrO	TiO ₂	L.O.I		
NCS DC 28152	Limestone	46.71	6.55	0.25	2.42	0.374	0.0046	0.042	0.0017	0.05	0.011	0.016	0.023	43.22	50	
NCS DC 28153	Limestone	41.81	10.37	0.417	2.35	0.543	0.007	0.05	0.0032	0.074	0.011	0.014	0.031	43.81	50	
NCS DC 28154	Limestone	50.61	2.88	0.289	3.02	0.622	0.0054	0.055	0.0028	0.164	0.026	0.024	0.032	41.92	50	
NCS DC 28155	Limestone	46.09	5.98	0.187	4.6	0.283	0.0046	0.033	0.0016	0.038	0.01	0.02	0.015	42.55	50	
NCS DC 28156	Limestone	51.22	2.43	0.181	3.32	0.34	0.0042	0.03	0.0019	0.094	0.0074	0.021	0.02	42.26	50	
NCS DC 28157	Limestone	53.79	1.17	0.151	1.32	0.225	0.0037	0.02	0.0027	0.066	0.0058	0.018	0.014	43.22	50	
NCS DC 28158	Limestone	48.56	4.31	0.302	3.99	0.657	0.0055	0.044	0.0044	0.184	0.028	0.022	0.051	41.7	50	
NCS DC 28159	Limestone	51.95	1.23	0.296	2.36	0.811	0.0077	0.016	0.0017	0.165	0.009	0.02	0.036	42.39	50	
NCS DC 28160	Limestone	54.2	0.82	0.146	0.96	0.328	0.0049	0.019	0.0019	0.084	0.006	0.018	0.016	43.27	50	
NCS DC 28161	Limestone	53.76	1.5	0.143	0.835	0.242	0.0058	0.018	0.0012	0.048	0.006	0.017	0.011	43.37	50	
NCS DC 28162	Dolomite	28.73	19.76	0.475	8.42	1.2	0.02	0.072	0.0028	0.039	0.033	0.019	0.036	40.56	50	
NCS DC 28163	Dolomite	30.22	20.85	0.244	1.87	0.205	0.015	0.038	0.0015	0.018	0.012	0.013	0.0079	45.31	50	
NCS DC 28164	Dolomite	30.15	20.91	0.248	2.16	0.25	0.016	0.039	0.0013	0.027	0.011	0.013	0.012	45.04	50	
NCS DC 28165	Dolomite	29.5	20.43	0.357	5.22	0.706	0.018	0.056	0.002	0.033	0.023	0.016	0.021	43.07	50	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
NCS DC 28166	Bauxite	Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	P ₂ O ₅	MnO	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	C	S	Cr		
NCS DC 28167	Bauxite	44.5	5.17	22.16	0.075	0.026	1.66	0.18	0.03	0.03	0.015	0.21	0.043	0.019	50	
NCS DC 28167	Bauxite	43.38	7.45	22.69	0.057	0.044	1.35	0.52	0.051	0.023	0.025	0.22	0.058	0.014	50	
NCS DC 28168	Bauxite	45.75	4.88	19.43	0.183	0.028	3.96	0.087	0.035	0.025	0.023	0.203	0.014	0.062	50	
		V	Ga	L.O.I	Zr	Sc	Zn									
NCS DC 28166	Bauxite	0.06	0.0028	25.35	0.011	0.0047	<0.005									
NCS DC 28167	Bauxite	0.059	0.0027	23.59	0.0057	0.0052	0.0051									
NCS DC 28168	Bauxite	0.1	0.0071	25	0.038	0.0021	0.0018									
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
NCS DC 28169	Zinc Concertrate	Zn	S	Fe	SiO ₂	Pb	Cu	As	Cd	Ag	CaO	MgO			25	
		Chemical Composition(g/T)													Unit Size (in g)	
Number	Name	SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P	TiO ₂	SrO	K ₂ O	Na ₂ O	S	L.O.I		
NCS DC 28171	Limestone	2.20	43.96	8.84	0.290	0.47	0.0064	0.0035	0.024	0.020	0.196	0.0080	0.006	43.82	50	
NCS DC 28174	Limestone	0.66	53.08	2.24	0.103	0.18	0.0052	0.0012	0.0080	0.020	0.044	0.005	0.024	43.75	50	
NCS DC 28175b	Limestone	0.76	41.91	11.15	0.316	0.272	0.013	0.0023	0.011	0.0066	0.041	0.003	0.002	44.86	50	
NCS DC 28176	Limestone	0.86	48.92	5.40	0.241	0.360	0.0051	0.0029	0.022	0.029	0.125	0.008	0.008	43.90	50	
NCS DC 28177	Limestone	1.25	54.43	0.50	0.179	0.195	0.0070	0.0018	0.010	0.024	0.048	0.007	0.012	43.10	50	
Number	Name	Chemical Composition(%)												Unit Size (in g)		
NCS DC28193	Alumina-silica Refractory	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	TiO ₂	P ₂ O ₅	MnO	Li ₂ O	K ₂ O	Na ₂ O	SrO			
		47.85	46.3	2.34	0.46	0.2	1.78	0.21	0.022	0.062	0.63	0.086	0.036	30g		
Number	Name	Chemical Composition(g/T)													Unit Size (in g)	
NCS DC 28241	V-Ti magnetite	TFe	CaO	MgO	SiO ₂	Al ₂ O ₃	S	P	MnO	TiO ₂	Mn	Cu	Cr ₂ O ₃	V ₂ O ₅		
NCS DC 28242	Hematite	63.97	0.94	1.74	3.98	1.09	0.04	0.017	0.197	2.59			0.42	0.55	100	
NCS DC 28242	Hematite	53.34	0.43	0.13	8.71	1.78	1.88	0.126		0.087	0.199	0.076			100	
NCS DC 28243	Hematite	55.71	0.3	0.1	6.97	1.07	0.98	0.121		0.049	0.143	0.068			100	
Number	Name	Chemical Composition(g/T)												Unit Size (in g)		
NCS DC 28244	Limestone	CaO	MgO	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	S	P	MnO	TiO ₂	SrO	L. O. I				
NCS DC 28244	Limestone	51.32	2.94	1.49	0.39	0.171	0.0082	0.0022	0.0026	0.018	0.018	43.47	50			
NCS DC 28245	Limestone	53.4	1.9	0.37	0.17	0.125	0.014	0.0015	0.0092	0.0085	0.024	43.93	50			
NCS DC 28246	Limestone	54.92	0.37	0.47	0.203	0.107	0.01	0.0017	0.0081	0.0092	0.017	43.54	50			
NCS DC 28247	Limestone	47.82	6.13	0.7	0.222	0.201	0.014	0.0066	0.0095	0.013	0.018	44.46	50			
NCS DC 28248	Limestone	45.88	7.68	0.76	0.24	0.229	0.016	0.0078	0.01	0.014	0.018	44.51	50			

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P	S	L.O.I	TiO ₂	SrO			
NCS DC 28201	Dolomite	6.75	30.62	20.53	0.085	0.0048	0.0072	0.0012	0.0019	41.00					50
NCS DC 28202	Dolomite	2.12	30.79	20.73	0.275	0.203	0.026	0.0013	0.016	45.22					50
NCS DC 28203	Dolomite	1.45	34.74	17.16	0.404	0.286	0.012	0.016	0.028	45.58					50
NCS DC 28204	Limestone	0.83	50.72	3.96	0.208	0.18	0.012	0.0076	0.016	43.70	0.006	0.046			50
NCS DC 28205	Limestone	2.17	52.42	1.92	0.197	0.39	0.0054	0.0019	0.012	42.53	0.0093	0.023			50
NCS DC 28206	Limestone	4.64	41.66	11.31	0.112	0.16	0.005	0.0032	0.0093	41.70	0.0056	0.015			50
NCS DC 28207	Dolomite	1.26	30.33	20.88	0.44	0.27	0.013	0.018	0.033	46.11					50
NCS DC 28208	Dolomite	0.99	30.8	20.79	0.32	0.23	0.019	0.0013	0.022	46.2					50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TMn	MnO ₂	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	TiO ₂	Cu	Zn	Ni	S	P	
NCS DC 28209	Manganese	27.76	21	12	17.54	1.77	5.44	4.08	0.085	0.0066	0.0071	0.0025	0.0067	0.069	50
NCS DC 28210	Manganese	44.76	66.46	5.72	4.62	7.28	0.24	0.257	0.34	0.062	0.088	0.057	0.014	0.099	50
NCS DC 28211	Manganese	32.7	32.32	10.47	14.4	3.3	4.21	3.04	0.16	0.02	0.027	0.016	0.009	0.087	50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	S	P				
NCS DC 28212	Iron Ore	56.25	26.9	8.86	2.53	8.04	1.96	0.289	0.208	0.197	0.032				50
NCS DC 28213	Iron Ore	50.92	19.9	13.68	3.28	6.9	3.4	0.943	0.241	0.13	0.05				50
NCS DC 28214	Iron Ore	65.97	27	5.02	0.7	0.43	0.45	0.094	0.541	0.291	0.013				50
NCS DC 28216	Iron Ore	62.01	26.9	6.74	1.46	3.65	1.1	0.176	0.388	0.258	0.02				50
NCS DC 28217	Iron Ore	64.82	24.5	4.91	1.3	0.85	0.31	0.088	0.949	0.011	0.053				50
NCS DC 28218	Iron Ore	64.81	25.4	5.04	0.8	0.65	1.78	0.084	0.477	0.035	0.026				50
NCS DC 28219	Iron Ore	68.55	23	3.21	0.54	0.21	0.2	0.052	0.116	0.027	0.0054				50
NCS DC 28220	Iron Ore	69.05	23.8	2.45	0.5	0.2	0.17	0.079	0.313	0.011	0.01				50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S				
NCS DC 28221	Iron Ore	67.84	28.8	2.34	0.6	0.63	1.4	0.07	0.0061	0.0046	0.041				50
NCS DC 28222	Iron Ore	66.64	0.11	27.9	2.96	0.76	0.86	1.62	0.091	0.07	0.0051				50
NCS DC 28223	Iron Ore	66.31	24.4	4.17	1.04	0.64	0.26	0.085	0.709	0.039	0.011				50
NCS DC 28224	Iron Ore	63.2	1.4	6.55	1.02	0.86	0.5	0.083	0.319	0.02	0.015				50
NCS DC 28225	Iron Ore	54.96	10.7	5.89	2.93	11.49	0.98	0.171	0.152	0.05	0.032				50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		CaF ₂	CaCO ₃	SiO ₂	TFe	Mn	S	P							
NCS DC 28226	Fluorite	77.33	0.20	18.04	0.31	0.014	0.068								50
NCS DC 28227	Fluorite	78.75	0.33	19.36	0.28	0.012	0.028								50
NCS DC 28228	Fluorite	94.81	0.99	2.76	0.26	0.010	0.107	0.076							50
NCS DC 28229	Fluorite	85.56	0.58	10.62	0.28	0.013	0.079	0.045							50
NCS DC 28230	Fluorite	90.72	0.87	7.68	0.25	0.012	0.084	0.063							50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S	Cu	C		
NCS DC 28231	Sintering Ore	56.53	22.9	5.57	1.90	11.46	1.75	0.202	0.103	0.027	0.063				50
NCS DC 28232	Iron Ore	67.42	27.40	1.80	0.78	0.61	2.43	0.132	0.069	0.0065	0.318				50
NCS DC 28233	Iron Ore	53.35	17.20	9.42	0.70	2.13	8.83	0.203	0.052	0.012	0.083				50
NCS DC 28234a	Iron Ore	45.17	15.10	15.55	1.33	4.74	9.82	0.167	0.090	0.023	0.104				50
NCS DC 28234b	Iron Ore	48.87	15.9	12.85	1.12	3.75	8.88	0.185	0.083	0.022	0.095	0.015	0.544		50
NCS DC 28234c	Iron Ore	49.64	21.1	11.54	1.87	5.85	5.81	0.112	0.105	0.040	0.504	0.156	0.798		50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	Cr	Ni	Mn	Ti	Co	S			
NCS DC 28235	High Chromium - Nickel - Iron ore	38.38	15.21	2.89	0.20	8.16	1.50	1.36	0.67	0.042	0.114	0.012			50
NCS DC 28236	High Chromium - Nickel - Iron ore	49.05	3.60	6.53	0.51	0.64	1.66	1.02	0.51	0.075	0.069	0.112			50

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Number	Name	Chemical Composition(Percent)										Unit Size (in g)
NCS DC 28237	Sinter Ore	TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S	50
NCS DC 28238	Sinter Ore	55.24	13.80	6.45	2.80	10.80	1.22	0.205	0.157	0.048	0.068	50
NCS DC 28239b	Pellet Ore	51.72	16.36	10.74	3.56	9.07	2.95	0.650	0.229	0.053	0.084	50
NCS DC 28240a	Pellet Ore	63.78	0.77	5.29	0.98	0.85	1.59	0.065	0.18	0.016	0.0086	50
		66.18	0.78	3.81	0.43	0.51	0.79	0.040	0.048	0.010	0.0066	50
Number	Name	Chemical Composition										Unit Size (in g)
		Au(μg/g)	Ag(μg/g)	Cu(%)	Pb(%)	Zn(%)	As(%)	Sb(%)	Hg(mg/g)	Cd(%)		
NCS DC 29101	Gold ore	0.64										500
NCS DC 29102	Gold ore	4.3	37.4	0.3	1.61	0.22						500
NCS DC 29103	Gold ore	20	18	0.12	0.61	0.1						500
NCS DC 29104	Silver ore		50.3	0.19	*83.8	*84.9	0.027	0.012	(3.85)			50
NCS DC 29105	Silver ore		138.1	0.5	0.02	*67.6	0.073	0.032	(10.1)			50
NCS DC 29106	Silver ore		199	0.68	0.01	0.011	0.078	0.05	(18)			50
NCS DC 29107	Copper ore		6.1	0.29	*34.5	0.01	*41.4	*23.4	(0.15)			50
NCS DC 29108	Copper ore		14.9	0.9	*80	0.02	*76.6	*11.7	(0.028)			50
NCS DC 29109	Copper ore		59.9	3.84	0.024	0.083	0.046	*71	(0.043)	*5.68		50
NCS DC 29110	Copper ore		120	8.53	0.027	0.19	0.02	*35.3	(0.039)	*13.5		50
NCS DC 29111	Pb-Zn ore		12.9	0.02	0.48	4.94	*90	*9.0	(12.6)	0.019		50
NCS DC 29112	Pb-Zn ore		362	0.1	2.93	0.51	0.082	0.011	(0.233)			50
NCS DC 29113	Pb-Zn ore		103	0.075	2.19	1.54	0.04	*38.3	(0.074)			50
NCS DC 29114	Pb-Zn ore		367.9	0.071	22.96	16.22	0.138	0.044	(270)	0.066		50
NCS DC 29115	Pb-Zn ore		5.3	0.021	1.25	30.19	*95	*20.5	(84.8)	0.119		50
Number	Name	Chemical Composition								Unit Size (in g)		
		Pt(x10 ⁻⁶)	Pd(x10 ⁻⁶)	Ru(x10 ⁻⁹)	Rh(x10 ⁻⁹)	Ir(x10 ⁻⁹)	Os(x10 ⁻⁹)	Cu(x10 ⁻²)	Ni(x10 ⁻²)			
NCS DC 29116	Platinum Group	2.43	1.68	1.5	1.9	1.6	1.9	3.58	1.78			500
NCS DC 29117	Platinum Group	10.61	0.6	4.2	3.6	4.4	3.7	3.01	1.76			500
NCS DC 29118	Platinum Group	0.9	0.7	3.5	3.2	3.2	3	3.25	1.76			500
NCS DC 29119	Platinum Group	4.44	1.33	0.71	1.4	1.9	1.6	0.62	0.053			500
NCS DC 29120	Platinum Group	0.38	0.4	7.8	18	23.6	8.2	0.11	0.22			500
Number	Name	μg/g										Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Cd	Ce	Co	Cr	
NCS DC36012	Perlite	0.053	0.59	26	164	8.5	0.18	0.07	37	0.33	-2.3	70
NCS DC36013	Sepiolite	0.15	2.3	6.9	72	3.6	0.18	-1.8	39	15	116	70
		μg/g										
		Cs	Cu	Dy	Er	Eu	Ga	Gd	Hf	Hg	Ho	In
NCS DC36012	Perlite	13.8	-1.9	2	1.46	0.29	22	2	4.3	(3.4)**	0.44	0.04
NCS DC36013	Sepiolite	4	25	3.3	1.8	0.8	5.9	4	-1.2	0.16	0.66	0.027
		μg/g										
		La	Li	Lu	Mo	Nb	Nd	Ni	Pb	Pr	Rb	S
NCS DC36012	Perlite	21	8.3	0.31	4.8	30	12.4	1.5	46	3.9	334	-38
NCS DC36013	Sepiolite	30	55	0.26	-0.25	3.9	24	57	8.7	6	20	-136
		μg/g										
		Sb	Sc	Sm	Sn	Sr	Ta	Tb	Th	Tm	U	V
NCS DC36012	Perlite	-0.08	3.4	2.3	2.2	118	3	0.34	35	0.25	19	-2.6
NCS DC36013	Sepiolite	-0.57	5.6	4.3	1.2	49	0.3	0.62	3.8	0.27	5.3	81
		μg/g					%					
		W	Y	Yb	Zn	Zr		SiO ₂	Al ₂ O ₃	TFE ₂ O ₃	FeO	MgO
NCS DC36012	Perlite	1.9	14	1.8	40	91		72.72	12.69	0.62	0.07	0.25
NCS DC36013	Sepiolite	0.5	23	1.6	105	43		63.55	4.45	1.46	-0.1	18
		%										
		CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO	L.O.I.	TC	CO ₂	H ₂ O+	
NCS DC36012	Perlite	0.82	3.03	4.65	0.079	0.004	0.051	4.97	0.028	-0.045	4.91	
NCS DC36013	Sepiolite	2.56	0.12	0.32	0.18	0.41	0.022	8.55	0.63	1.63	6.39	

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Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		WO ₃	SiO ₂	S	Cu	Mn	Mo	P	As	Sn	Ca				
NCS DC35018	Black tungsten concentrate	70.5	1.94	0.72	0.019		0.011	0.038	0.028	0.02	4.93				50g
NCS DC35019	Black tungsten concentrate	69.19	1.7	0.21	0.038		0.01	0.021	0.052	0.13	1.94				50g
NCS DC35020	Black tungsten concentrate	67.18	1.98	0.25	0.044		0.012	0.024	0.083	0.14	1.62				50g
NCS DC35021	White tungsten concentrate	69.13		0.73	0.065	0.042	0.031	0.044							50g
NCS DC35022	White tungsten concentrate	66.02		0.35	0.0034	0.029	0.073	0.0079							50g
NCS DC35023	White tungsten concentrate	57.01		1.24	0.13	0.12	0.012	0.091							50g
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	CaF ₂	L.O.I				
NCS DC 62001	Iron Ore	33.06	5.16	48.86	0.24	2.56	1.00	2.51	0.17		5.45				20
NCS DC 62002	Limestone	2.86	0.56	0.45	0.02	50.94	2.69	0.11	0.14		41.99				20
NCS DC 62003	Fluorite	23.52	2.50	0.63		0.50	0.03	1.21	0.32	67.22	0.62				20
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	MnO	P ₂ O ₅		SO ₃	Cl	fSiO ₂
NCS DC 60109a	Limestone	4.05	0.94	0.58	0.052	50.09	1.79	0.42	0.027	0.014	0.033	0.054	0.0062	2.02	50
NCS DC 60110a	Limestone	2.25	0.6	0.38	0.03	47.07	5.81	0.2	0.016	0.012	0.037	0.032	0.0054	1.21	50
		L.O.I	CO ₂												
NCS DC 60109a	Limestone	41.53	(41.32)												
NCS DC 60110a	Limestone	43.22	(43.02)												
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	MnO	P ₂ O ₅		SO ₃	H ₂ O ⁺	L.O.I
NCS DC 60122a	Kaolin	43.41	34.77	1.5	0.038	0.069	0.78	0.045	0.25	0.002	0.21	5.51	13.24	17.31	50
NCS DC 60123a	Kaolin	45.3	37.7	0.35	0.064	0.021	0.042	0.045	0.06	0.0018	0.16	0.76	15.26	14.81	50

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	MnO	FeO	P ₂ O ₅	S	SO ₃	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	
NCS DC 60102	Clay	10.55	49.98	26.27	0.052	(0.080)	0.14		0.049	0.70	0.79	0.060	0.46	0.13	50
NCS DC 60104	Clay	0.33	53.67	31.32	0.020	(0.052)	0.053		0.023	0.030	1.15	2.55	0.083	1.80	50
NCS DC 60105	Clay	4.64	66.64	13.28	0.088	(0.80)	0.106		0.027	0.66	2.50	1.81	1.84	3.23	50
NCS DC 60106a	Shale	5.67	69.53	14.82	0.024	(0.40)	0.043		0.028	0.68	3.76	0.20	0.67	0.22	50
NCS DC 60107a	Limestone	0.11	1.09	0.24	0.0067		0.0081		0.018	0.010	0.084	0.017	0.81	54.03	50
NCS DC 60108a	Limestone	0.17	2.09	0.33	0.0089		0.0061		0.016	0.015	0.17	0.017	2.25	51.61	50
NCS DC 60112	Gypsum	0.16	1.68	0.34					51.91	0.016	0.094	0.065	1.74	39.24	50
NCS DC 60115	Gypsum	0.11	0.63	0.14					40.72	0.010	0.026	0.014	2.47	32.30	50
NCS DC 60116a	Siliceous Sand Ore	0.093	98.51	0.84	(0.0016)		(0.0041)			0.020	0.061	0.021	0.066	0.077	50
NCS DC 60117a	Siliceous Sand Ore	0.21	95.74	2.36	(0.0033)		(0.0076)			0.036	0.67	0.25	0.098	0.17	50
NCS DC 60119	Graphite Ore	6.73	49.84	12.93	0.084		0.13	1.18		0.57	2.54	1.60	6.10	9.37	50
NCS DC 60120	Graphite Ore	6.99	49.34	13.03	0.054		0.14	2.59		0.64	2.17	1.56	5.35	5.34	50
NCS DC 60121	Graphite Ore	1.48	10.34	5.60	0.022		0.16	0.14		0.55	0.99	0.23	0.50	0.74	50
NCS DC 60122	Kaolin	0.50	54.55	31.41	0.0032	(0.026)	0.099		0.53	0.69	0.34	0.015	0.12	0.052	50
NCS DC 60123	Kaolin	0.72	44.55	38.62	0.0054	(0.33)	0.21		0.12	0.39	0.049	0.069	0.068	0.16	50
NCS DC 60124	Siliceous Lime	0.10	50.50	0.39	0.096	0.28	0.052	(0.010)		0.022	0.14	0.052	0.95	40.39	50
NCS DC 60125	Nephelinite	1.37	60.64	20.05	0.050	0.28	0.020	(0.011)		0.12	5.06	8.97	0.13	0.52	50
NCS DC 60126	Nephelinite	0.33	39.42	29.67	0.031	1.24	0.072		(0.064)	0.14	4.72	12.59	0.92	5.98	50
NCS DC 60127	Pyrophyllite	1.94	66.84	23.58	0.0037		0.20		0.61	0.70	0.38	0.34	0.087	0.17	50
NCS DC 60128	Pyrophyllite	0.22	70.34	22.20	0.0040		0.11		0.17	0.18	0.028	0.043	0.041	0.066	50
NCS DC 60129	Brucite	0.49	2.69	0.053	0.036		0.12				0.0041	0.0066	61.43	2.51	50
NCS DC 60130	Brucite	0.40	4.47	0.067	0.033		0.12				0.0066	0.013	56.21	6.18	50
NCS DC 60131	Talcum	0.29	62.03	0.082	0.0015		0.14			0.0052	0.009	0.022	31.89	0.38	50
NCS DC 60132	Talcum	2.64	47.71	7.62	0.021		0.11			0.52	0.026	0.049	29.50	2.39	50
		fsio ₂ *	CO ₂	H ₂ O ⁺	Cl	L.O.I	SrO	Cr ₂ O ₃	A.U.M*	Ash	Vdatile	Co			
NCS DC 60102	Clay		(0.041)	(9.64)	0.0041	10.62									
NCS DC 60104	Clay		(0.051)	(8.64)	0.0029	8.81									
NCS DC 60105	Clay		1.65	(3.38)	0.011	5.10									
NCS DC 60106a	Shale		0.13	(3.71)	0.014	4.17									
NCS DC 60107a	Limestone	0.67	(43.12)		0.0028	43.12									
NCS DC 60108a	Limestone	1.38	(42.59)		0.0066	42.84									
NCS DC 60112	Gypsum		(4.02)	0.39	0.033	4.55	(0.27)								
NCS DC 60115	Gypsum		(5.44)	17.95	0.0032	23.60	(0.096)								
NCS DC 60116a	Siliceous Sand Ore					0.24		0.00034							
NCS DC 60117a	Siliceous Sand Ore					0.35		0.00054							
NCS DC 60119	Graphite Ore		3.60	2.60								2.91			
NCS DC 60120	Graphite Ore		0.67	2.80								9.91			
NCS DC 60121	Graphite Ore		0.28	1.98						20.78	2.72	76.50			
NCS DC 60122	Kaolin		(0.026)	11.72		11.94									
NCS DC 60123	Kaolin		(0.06)	14.77		15.00									
NCS DC 60124	Siliceous Lime			2.34		6.93									
NCS DC 60125	Nephelinite			1.78											
NCS DC 60126	Nephelinite	2.97													
NCS DC 60127	Pyrophyllite			4.15		5.48									
NCS DC 60128	Pyrophyllite			5.17		6.34									
NCS DC 60129	Brucite		8.08	(25.24)											
NCS DC 60130	Brucite		9.95	(23.22)											
NCS DC 60131	Talcum		0.34	4.73		5.14		(92.78)							
NCS DC 60132	Talcum		2.17	7.34		9.40		(83.13)							

*fsio₂ is free SiO₂; A. U. M is acid-unsolvable material.

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Number	Name	Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	SO ₃	Chemical Composition(Percent)									Unit Size (in g)
NCS DC 61101	Soff Clay	0.86	55.90	28.57		1.21	1.54	1.74	0.30	0.70	8.72				50
NCS DC 61102	Potassium Feldspar	0.19	66.26	18.63		0.048	9.60	3.69	0.054	0.76	0.86				50
NCS DC 61103	Na-Ca-Si Glass	0.18	71.25	2.56	0.17	0.057	1.10	13.77	3.98	6.37	0.44				50
NCS DC 61104	Boron Silicate Glass	0.34	53.98	14.50		0.19	0.59	0.096	4.40	16.54	0.26	8.87	0.54		50
NCS DC 61105	Alumine	1.18	8.17	85.07		3.76	0.44	0.080	0.21	0.24	0.29				50
NCS DC 61106	Albite Cement	0.10	67.96	19.62		0.054	0.098	11.26	0.015	0.48	0.36				50
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	I.R	L.O.I			Unit Size (in g)
NCS DC 62101d	Portland	20.88	4.48	2.64	0.32	62.76	2.05	2.98	0.66	0.11	0.75	3.00			20
NCS DC 62102g	Cement	21.19	5.31	3.17	0.32	58.67	2.91	2.33	0.91	0.14		4.50			20
NCS DC 62103j	Cement Clinker	21.91	4.80	4.12	0.24	64.42	1.81	0.39	1.07	0.14	0.16	0.80			20
NCS DC 62104c	Cement Black Raw Meal	14.26	3.70	2.45	0.24	38.70	1.61	0.39	0.70	0.28		37.40			20
NCS DC 62105l	Cement raw meal	11.77	3.27	2.09	0.19	43.94	1.58	0.10	0.59	0.10		36.18			20
Number	Name	L.O.I	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	Adhered water	Crystallized water	Indissoluble material	Unit Size (in g)
NCS DC 62106d	Gypsum	24.48	6.37	1.87	0.57	0.10	29.32	6.26	30.36	0.38	0.08	micro	11.56	9.01	20
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	L.O.I	SO ₃	S	I.R		Unit Size (in g)
NCS DC 62107b	Alumina	4.97	83.90	3.91	4.19	0.99	0.46	0.38	0.11	0.44					20
NCS DC 62108d	Clay	65.00	15.48	6.16	0.77	1.47	1.60	2.40	1.10	5.55	0.06				20
NCS DC 62109	Portland pozzolanic cement	32.67	6.52	3.54	0.16	47.57	1.86	1.43	0.85	2.44	2.59				20
NCS DC 62110a	Portland blast-furnace slag cement	23.48	6.26	2.39	0.43	57.4	3.31	0.59	0.17	3.68	2.02				20
NCS DC 62111a	Portland fly ash cement	24.31	8.93	4.9	0.33	46.52	1.9	0.61	0.32	9.09	2.47				20
NCS DC 62112a	Aluminate cement	7.95	51.15	1.91	2.03	34.56	0.63	0.13	0.04	0.68		0.1			20
NCS DC 62113a	Granulated blast-furnace slag for cement	34.93	12.23	1.26	1.06	35.62	10.66	0.54	0.42	1.05	1.17	0.61			20
NCS DC 62114a	Pozzolana in cement industry	57.53	24.2	5.1	1.07	2.83	1.24	3.05	1.42	2.99	0.08				20
NCS DC 62115a	fly ash cement industry	48.93	36.62	4.37	1.46	4.42	0.84	0.57	0.17	1.76	0.35				20
NCS DC 62116a	Composite portland cement	16.34	4.01	2.22	0.22	57.86	2.28	0.55	0.11	13.86	2.3				20
NCS DC 62117	white portland cement	20.49	4.61	0.26	0.12	65.71	0.14	0.05	0.05	6.43	1.9				20
NCS DC 62118	moderate heat portland cement	21.73	4.75	4.12	0.23	60.99	4.37	0.43	0.12	0.81	2.27		1.18		20

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		Pozzolana or coal ash		Slag	Limestone	CO ₂	(not solved slag)		Cl-						
NCS DC 62119c	Contet of mixed materials of ordinary portland cement	4.5		5.8		1.2		0.98							20
NCS DC 62120	Contet of mixed materials of portland blast-furnace slag cement	0.5		18.5		7		3.5		97.5					20
NCS DC 62121a	Chloride content of cement raw meal											0.029			20
NCS DC 62122c	Chloride content of cement											0.012			20
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	L.O.I	F		CaF ₂	
NCS DC 62123	Sulphoaluminate cement clinker	8.56	32.6	2.21	1.51	43.4	1.37	9.55	0.22	0.09	0.41				20
NCS DC 62124	Sulphoaluminate cement raw meal	5.09	22.29	1.34	1.07	33.05	1.21	7.07	0.14	0.06	28.21				20
NCS DC 62125a	Cement contain F											0.18	(0.37)		20
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		Loss	TCaCO ₃	CaO	Fe ₂ O ₃	F									
NCS DC 62126b	Black raw meal CaCO ₃ titrmetric value	37.46	70.9	38.89	2.74	0.15									20
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		Remain after through 80 ymsieve				Blaine		Density							
NCS DC 62127g	Portland Cement Fineness and Blaine Std			2.03%			354.7m ² /kg		3.16g/cm ³						200
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	L.O.I				
NCS DC 62128C1	Series of Cement for XRF Analysis	25.49	6.96	3.31	0.43	51.18	3.94	3.24	1.07	0.42	3.61				20
NCS DC 62128C2	Series of Cement for XRF Analysis	24.1	6.93	3.2	0.42	53.59	3.7	3.18	1.06	0.4	3.25				20
NCS DC 62128C3	Series of Cement for XRF Analysis	23.78	6.56	3.19	0.41	54.14	3.47	3.13	1	0.39	3.82				20
NCS DC 62128C4	Series of Cement for XRF Analysis	23.3	6.33	3.05	0.4	55.5	3.28	2.92	0.94	0.34	3.58				20
NCS DC 62128C5	Series of Cement for XRF Analysis	23.13	6.1	3	0.39	57.08	3.13	2.82	0.89	0.29	3.05				20
NCS DC 62128C6	Series of Cement for XRF Analysis	22.8	5.82	2.91	0.38	58.14	2.93	2.66	0.85	0.26	2.97				20
NCS DC 62128C7	Series of Cement for XRF Analysis	22.56	5.55	2.83	0.37	59.44	2.66	2.44	0.79	0.23	2.86				20
NCS DC 62128C8	Series of Cement for XRF Analysis	22.27	5.32	2.74	0.36	60.63	2.47	2.37	0.75	0.19	2.8				20
NCS DC 62128C9	Series of Cement for XRF Analysis	22.02	5.09	2.69	0.34	61.5	2.26	2.16	0.68	0.17	2.87				20
NCS DC 62128C10	Series of Cement for XRF Analysis	21.81	4.78	2.58	0.33	62.65	2.07	2.05	0.62	0.13	2.84				20
NCS DC 62128C11	Series of Cement for XRF Analysis	21.45	4.46	2.49	0.32	64.01	1.85	1.83	0.57	0.1	2.65				20
Number	Name	Chemical Composition(Percent)											TFe (Fe ₂ O ₃)	Unit Size (in g)	
		SiO ₂	Al ₂ O ₃	Mg	CaO	TiO ₂	MnO	Na ₂ O	K ₂ O	S	Li	Rb			Ba
NCS DC 70001	Copper Ore	9.27	1.73	3.91	9.61	0.079	0.60	0.044	0.071	0.72				55.58	50
NCS DC 70002	Copper Ore	53.26	15.18	1.30	4.95	0.50	0.12	3.21	2.71	0.14			(0.08)	12.25	50
NCS DC 70003	Lead Ore	43.63	12.88	1.62	19.51	0.53	1.40	1.61	1.42	0.86				4.37	50
NCS DC 70004	Lead Ore	30.51	8.95	2.06	34.56	0.44	1.53	0.066	0.82	0.38				3.79	50
NCS DC 70005	Zinc Ore	82.95	2.80	0.082	1.91	0.017	0.026	0.56	0.99	2.87				3.50	50
NCS DC 70006	Molybdenum Ore	34.10	3.46	0.86	31.44	0.13	1.40	0.075	0.046	1.64				21.34	50
NCS DC 70008	Tungsten Ore	13.27	8.24	1.45	37.73	0.079	0.97	0.16	1.94	3.12	(0.02)	(0.08)		7.79	50
NCS DC 70009	Tungsten Ore	71.27	11.15	0.14	4.17	0.044	0.090	0.12	1.58	1.90	(0.03)	(0.05)		5.60	50
		Cu	Pb	Zn	As	Sn	W	Mo	F						
NCS DC 70001	Copper Ore	1.15		0.059					0.079						
NCS DC 70002	Copper Ore	0.19		0.013					0.080						
NCS DC 70003	Lead Ore	0.20	4.17	0.062					0.27						
NCS DC 70004	Lead Ore	0.035	0.61	0.092					0.23						
NCS DC 70005	Zinc Ore	0.71	0.25	2.75					1.20						
NCS DC 70006	Molybdenum Ore						0.36	1.51	4.08						
NCS DC 70008	Tungsten Ore	0.079	0.26	0.29	0.18	0.14	0.015		9.91						
NCS DC 70009	Tungsten Ore	0.096		0.103		0.17	0.22	0.098	4.84						

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(μg/g)																											
		Ag	As	Cu	Ga	Ge	Li	Pb	Sc	Zn	Cd	Sb	Ce	Dy	Eu														
NCS DC 70001	Copper Ore	3.9	4.2		22.6	0.89	(9)	9.1	1.8		0.42	0.36	13.2	1.1	0.28														
NCS DC 70002	Copper Ore	0.70	1.5		22.6	0.93	(15)	13.0	5.4		0.14	0.23	72.6	2.4	1.3														
NCS DC 70003	Lead Ore	14.7	85.1		16.7	0.90	(19)		7.5		3.2	39.3	78.3	3.0	1.2														
NCS DC 70004	Lead Ore	5.6	43.2		11.7	0.93	(18)		8.1		2.6	12.0	66.8	3.1	0.82														
NCS DC 70005	Zinc Ore	13.5	12.4		8.0	1.4	(86)		0.33		29.3	1.1	2.3	0.47	0.06														
NCS DC 70006	Molybdenum Ore	0.09	1.6	93.6	25.1	19.0	(3.2)	18.7	3.4	65.5	0.12	1.2	20.8	1.8	0.59														
NCS DC 70008	Tungslen Ore	8.3			17.8	2.5			1.8		26.1	5.1	10.0	0.46	0.15														
NCS DC 70009	Tungslen Ore	1.8	69.9		16.5	11.2		81.2	5.4		0.94	3.1	60.3	20.7	0.17														
		Chemical Composition(μg/g)																											
		Gd	Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Co															
NCS DC 70001	Copper Ore	1.1	0.26	7.5	0.16	4.7	1.0	0.21	0.11	0.89	0.78	1.4	7.3	76.0															
NCS DC 70002	Copper Ore	3.6	0.48	40.3	0.20	29.4	5.1	0.48	0.18	1.2	1.3	8.1	11.8	16.9															
NCS DC 70003	Lead Ore	3.7	0.61	40.5	0.24	28.2	5.1	0.58	0.23	1.5	1.5	8.1	15.4	14.7															
NCS DC 70004	Lead Ore	3.6	0.65	31.2	0.25	23.4	4.6	0.60	0.26	1.7	1.6	6.2	16.2	15.7															
NCS DC 70005	Zinc Ore	0.31	0.13	1.3	0.08	0.92	0.36	0.10	0.05	0.42	0.28	0.30	4.5	8.7															
NCS DC 70006	Molybdenum Ore	1.9	0.36	7.1	0.16	11.3	2.1	0.34	0.14	1.0	1.0	3.0	11.4	11.8															
NCS DC 70008	Tungslen Ore	0.64	0.11	5.0	0.06	4.0	0.79	0.15	0.04	0.28	0.23	1.1	2.8	2.7															
NCS DC 70009	Tungslen Ore	14.8	4.5	23.7	2.4	32.9	12.5	3.3	2.2	14.9	13.1	7.9	128	3.7															
		Chemical Composition(μg/g)																											
		Ni	Bi	Sn	W	Mo	In	Se	Te	Ti	Th	Cr	Rb	R _F															
NCS DC 70001	Copper Ore	9.6	1.5	11.1	4.1	1.4	1.4	5.1	0.62	0.06	0.90	(7)																	
NCS DC 70002	Copper Ore	5.6	0.43	3.8	3.9	2.4	0.25	0.89	0.13	0.36	8.8	(10)	(94)																
NCS DC 70003	Lead Ore	27.7	15.6	3.0	17.6	1.6	0.12	1.7	3.9	0.43	10.2	(29)	(55)																
NCS DC 70004	Lead Ore	34.5	12.5	2.9	30.6	1.3	0.09	0.81	1.2	1.0	10.5	(41)	(74)																
NCS DC 70005	Zinc Ore	5.5	56.4	6.1	3.4	2.8	0.23	2.3	0.17	0.49	(1.1)	(62)	(73)																
NCS DC 70006	Molybdenum Ore	17.8	2.2	86.7			2.9	2.1	0.40	0.06	2.3	(24)		(0.35)															
NCS DC 70008	Tungslen Ore	4.1	110			4.2	8.7	0.39	0.66	5.0	2.2	(6.5)		(0.12)															
NCS DC 70009	Tungslen Ore	2.8	680				1.3	0.96	2.9	1.8	28.3	(30)		(0.08)															
		Chemical Composition(μg/g)																											
		Cs																											
NCS DC 70002	Copper Ore	(10)																											
NCS DC 70003	Lead Ore	(6)																											
NCS DC 70004	Lead Ore	(2.3)																											
NCS DC 70008	Tungslen Ore	(36)																											
NCS DC 70009	Tungslen Ore	(41)																											
Number	Name	Chemical Composition(Percent)												Unit Size															
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	L.O.I	(in g)																	
NCS DC62004	Iron Tailings in Cement Industry	19.69	4.44	16.95	1.01	41.3	8.7	0.28	0.2	0.21	3.97	20																	
NCS DC62005	Sandstone in Cement Industry	78.07	5.14	4.74	0.28	4.51	0.69	0.03	1.02	0.25	3.46	20																	
NCS DC62006	Water-soluble Chromium(VI) content of Cement												1000																
NCS DC62007	Sand in Cement Industry	98.13	0.43	1.02	(0.02)	(0.09)	(0.06)	(0.03)	(0.09)	(0.03)		20																	
NCS DC62008	Desulfurization Gypsum	11.35	3.75	1.08	0.22	29.46	5.06	26.96	0.64	0.56	19.59	20																	
NCS DC62009	Phosphorus Gypsum	13.3	0.42	0.12		27.94	0.02	39.01	0.11	0.06	18.69	20																	
NCS DC62010	Granulated electric furnace Phosphorous slag	39.47	3.85	0.95	0.33	47.03	0.72	1.02	0.44	0.08	0.07	20																	
NCS DC62011	Silica fume	91.85	0.93	0.61	0.02	0.83	1.07	0.53	1.43	0.66	1.85	15																	
		Cr ⁵⁺ (mg/kg)																											
		Adhered water	Crystallized water	SO ₂	Cl	F	P ₂ O ₅	Ss	F																				
NCS DC62006	Water-soluble Chromium(VI) content of Cement	5.33																											
NCS DC62008	Desulfurization Gypsum		0.2	10.5	0.61	0.059	0.1	0.18																					
NCS DC62009	Phosphorus Gypsum		0.12	17.3		0.002		0.99	0.1	(0.09)																			
NCS DC62010	Granulated electric furnace Phosphorous slag							3.68																					
		Water soluble P ₂ O ₅	Water soluble K ₂ O	Water soluble Na ₂ O	Water soluble F	pH																							
NCS DC62009	Phosphorus Gypsum	-0.393	-0.034	-0.038	-0.044	-4.6																							

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Number		Name	Chemical Composition(%)											Unit Size (in g)	
NCS DC62014		Free calcium in cement clinker	f-CaO											20	
Number		Name	Chemical Composition(%)											Unit Size (in g)	
			SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	Cl-	L.O.I		
NCS DC62129	R1	Cement raw meal	10.5	2.06	1.58	0.16	46	1.13	0.05	0.3	0.06	0.008	37.87	20	
	R2	Cement raw meal	10.66	2.2	1.63	0.17	45.39	1.36	0.15	0.33	0.1	0.011	37.67	20	
	R3	Cement raw meal	11.31	2.44	1.76	0.17	44.63	1.51	0.18	0.38	0.15	0.013	37.17	20	
	R4	Cement raw meal	11.92	2.64	1.98	0.18	43.85	1.63	0.23	0.41	0.19	0.016	36.67	20	
	R5	Cement raw meal	12.47	2.84	2.09	0.19	43.17	1.77	0.36	0.47	0.22	0.018	36.09	20	
	R6	Cement raw meal	13.56	3.14	2.46	0.2	41.91	1.83	0.39	0.52	0.26	0.019	35.29	20	
	R7	Cement raw meal	14	3.33	2.51	0.22	41.16	2.06	0.41	0.57	0.3	0.021	35.13	20	
	R8	Cement raw meal	14.52	3.48	2.64	0.23	40.44	2.25	0.53	0.62	0.34	0.023	34.67	20	
	R9	Cement raw meal	15.33	3.73	2.84	0.24	39.37	2.41	0.67	0.67	0.39	0.027	34.11	20	
	R10	Cement raw meal	16.23	3.96	3.17	0.25	38.3	2.56	0.7	0.72	0.43	0.029	33.33	20	
	R11	Cement raw meal	16.71	4.16	3.16	0.26	37.61	2.74	0.7	0.75	0.46	0.031	33.13	20	
Number		Name	Chemical Composition(μg/g)											Unit Size (in g)	
NCS DC 70317		Rock	Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs
NCS DC 70318		Rock	0.06	18.0	1.4	30.6	437	3.32	0.49	0.9	0.10	207	6.7	47.6	20.2
NCS DC 70319		Rock	0.21	19.6	1.2	66.2	470	2.31	0.80	1.4	0.19	244	7.6	22.6	15.0
NCS DC 70320		Rock	0.14	12.3	1.1	41.5	483	2.56	0.70	1.1	0.17	152	7.3	24.4	13.0
			Cu	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb
NCS DC 70317		Rock	247	424	14.4	1.19	5.7	0.034	29.7	614	6.6	12.0	20.8	389	127
NCS DC 70318		Rock	16.2	456	16.3	1.33	6.7	0.030	36.6	422	0.59	14.7	16.9	420	35.8
NCS DC 70319		Rock	151	459	15.8	1.13	9.5	0.028	26.1	527	7.0	16.1	9.5	484	46.8
NCS DC 70320		Rock	49.0	505	16.9	1.12	5.5	0.012	25.6	451	2.7	10.5	11.1	564	45.4
			Pb	Sc	Sb	Se	Sn	Sr	Ta	Te	Th	Ti(%)	Tl	U	V
NCS DC 70317		Rock	141	6.5	4.44	0.19	3.3	185	1.1	0.21	17.5	0.217	0.96	3.4	45.7
NCS DC 70318		Rock	180	7.3	0.84	0.05	3.8	165	1.8	(0.03)	25.1	0.253	1.0	4.8	52.5
NCS DC 70319		Rock	154	6.2	2.70	0.18	2.7	256	1.8	0.10	25.5	0.344	1.1	4.8	74.7
NCS DC 70320		Rock	136	6.0	1.27	0.11	2.0	404	1.2	0.07	16.7	0.274	0.91	3.6	59.4
			W	Zn	Zr	l	In	Pd*	Pt*	S	La	Ce	Pr	Nd	Sm
NCS DC 70317		Rock	9.2	116	188	(0.4)	(0.07)	(0.3)	(0.4)	(117)	37.9	72.0	7.89	29.0	5.39
NCS DC 70318		Rock	4.1	54.1	225	(0.3)	(0.04)	(0.4)	(0.3)	(48)	47.8	89.6	9.78	35.8	6.62
NCS DC 70319		Rock	9.3	62.9	299	(0.3)	(0.04)	(0.3)	(0.3)	(400)	42.6	78.1	8.57	30.6	5.42
NCS DC 70320		Rock	4.2	61.1	184	(0.3)	(0.04)	(0.3)	(0.3)	(183)	32.5	60.5	6.94	25.7	4.49
			Eu	Gd	Tb	Dy	Ho	Er	Tm	Yo	Lu	Y	SiO ₂ *	Al ₂ O ₃ *	Fe ₂ O ₃ (T)*
NCS DC 70317		Rock	0.96	4.90	0.76	4.24	0.83	2.47	0.38	2.46	0.36	23.0	64.22	10.84	3.07
NCS DC 70318		Rock	1.07	5.83	0.91	4.92	0.97	2.90	0.46	2.83	0.44	26.5	73.37	12.73	3.19
NCS DC 70319		Rock	0.97	4.57	0.70	3.91	0.79	2.39	0.38	2.55	0.39	21.6	71.23	13.22	4.11
NCS DC 70320		Rock	0.96	3.74	0.54	2.94	0.58	1.64	0.25	1.63	0.25	15.3	70.36	13.95	3.20
			MgO*	CaO*	Na ₂ O*	K ₂ O*	TiO ₃ *	MnO*	P ₂ O ₅ *						
NCS DC 70317		Rock	0.87	8.19	1.74	2.86	0.366	0.079	0.090						
NCS DC 70318		Rock	1.07	1.32	2.09	3.56	0.422	0.055	0.097						
NCS DC 70319		Rock	0.70	1.40	2.72	3.65	0.589	0.069	0.111						
NCS DC 70320		Rock	0.93	2.40	3.26	3.18	0.461	0.059	0.129						
Value with * is in percent															

Value with * is in percent

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Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	
NCS DC 70323	Rock	0.10	54.6	2.9	134	475	3.88	0.48	1.3	0.08	71	13.2	59.0	42.5	60
NCS DC 70324	Rock	0.07	24.9	1.4	143	472	5.62	0.45	0.9	0.08	63	10.3	55.2	16.6	60
		Ou	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb	
NCS DC 70323	Rock	44.0	555	17.1	1.66	6.3	0.066	69.8	608	0.66	15.5	37.2	542	27.7	
NCS DC 70324	Rock	27.7	457	17.6	1.63	7.4	0.053	66.8	392	0.65	17.2	27.8	625	32.1	
		Pb	Sc	Sb	Se	Sn	Sr	Ta	Te	Tn	Ti(%)	Tl	U	V	
NCS DC 70323	Rock	110	10.5	10.4	0.39	4.6	327	1.2	0.15	15.6	0.339	0.66	2.1	85.0	
NCS DC 70324	Rock	131	9.3	1.55	0.33	6.4	157	1.4	0.07	14.9	0.364	0.69	2.3	77.3	
		W	Zn	Zr	I	In	Pd*	Pt*	S	La	Ce	Pr	Nd	Sm	
NCS DC 70323	Rock	6.5	77.1	210	(0.5)	(0.07)	(0.8)	(0.6)	(528)	42.6	90.1	10.1	36.3	7.19	
NCS DC 70324	Rock	2.6	76.4	247	(0.5)	(0.06)	(7)	(0.4)	(160)	40.0	84.4	9.42	34.8	6.69	
		Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	La	Y	SiO ₂ *	Al ₂ O ₃ *	Fe ₂ O ₃ (T)*	
NCS DC 70323	Rock	1.40	6.58	1.01	5.56	1.06	2.98	0.44	2.67	0.38	29.5	60.95	11.89	5.47	
NCS DC 70324	Rock	1.29	6.05	0.93	5.10	0.99	2.75	0.41	2.57	0.37	25.9	70.16	12.79	4.82	
		MgO*	CaO*	Na ₂ O*	K ₂ O*	TiO ₂ *	MnO*	P ₂ O ₅ *							
NCS DC 70323	Rock	0.78	7.77	1.09	2.01	0.558	0.078	0.124							
NCS DC 70324	Rock	0.62	2.29	1.48	2.67	0.616	0.051	0.142							

Value with * is in percent

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Number	Elements ⁽¹⁰⁻⁶⁾										Unit Size (in g)
	Ag	As	Bi	Cd	Co	Cu	Ga	Ge	In	Mo	
DC70325	103±6	0.111±0.007*	71.4±2.8	0.021±0.001*	79.5±3.8	3.40±0.07*	11.68±0.96	141Δ 105-15	5.60±0.42	54.8±3.0	50
DC70326	8.77±0.96	0.050±0.007*	5.67±0.48	2.18±0.22	0.140±0.007*	1.25±0.05*	6.03±0.72	1.02±0.12	0.35±0.03	12.4±1.2	50
DC70327	125±8	0.055±0.007*	1.78±0.11*	44.5±4.4	18.1±0.8	0.211±0.014*	15.32±0.72	2.76±0.26	6.11±0.40	0.361±0.019*	50
DC70328	43.2±2.6	0.92±0.05*	0.033±0.003*	31.0±3.2	2.62±0.22	0.229±0.011*	13.2±1.1	1.22±0.08	36.7±3.2	75±4	50
	Ni	Pb	Sb	Sc	Se	Sn	Te	Th	Tl	U	
DC70325	23.8±1.2	2.96±0.07*	0.014±0.002*	3.82±0.34	29.6±1.8	15.4±0.7	7.01±0.39	4.96±0.46	1.84±0.16	3.18±0.20	
DC70326	5.30±0.19*	(78)	35.7±3.4	9.08±0.62	59.5±5.2	2.49±0.38	4.27±0.36	1.31±0.17	0.92±0.11	0.32±0.04	
DC70327	0.065±0.004*	0.68±0.05*	34.5±1.4	17.8±1.1	45.6±1.7	0.056±0.008*	82.9±4.6	18.86±0.96	10.0±1.2	68.5±3.6	
DC70328	10.2±1.1	2.08±0.04*	0.012±0.001*	0.91±0.09	3.78±0.36	9.56±0.40*	0.34±0.11	0.83±0.09	0.45±0.04	29.8±1.2	
	W	Zn*	Zr	Re	La	Ce	Pr	Nd	Sm	Eu	
DC70325	15.7±1.6	3.47±0.06	96±4		15.74±0.96	30.8±2.6	3.42±0.17	13.14±0.72	2.49±0.19	0.58±0.07	
DC70326	7.7±1.1	0.023±0.002	42.2±3.4		5.93±0.42	12.9±1.3	1.49±0.12	6.4±0.7	1.34±0.11	0.34±0.03	
DC70327	7.96±0.32*	0.248±0.008	101±6	0.35±0.03	29.8±2.0	(58.1)	8.58±0.38	34.1±1.8	9.26±0.54	0.79±0.08	
DC70328	0.032±0.007*	0.640±0.024	50±5		10.4±0.8	16.9±1.1	1.84±0.13	5.9±0.5	1.10±0.09	0.14±0.01	
	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y		
DC70325	2.20±0.14	0.33±0.03	1.78±0.12	0.35±0.03	1.01±0.06	0.15±0.02	0.98±0.06	0.15±0.02	9.26±0.42		
DC70326	1.20±0.09	0.20±0.02	1.14±0.09	0.23±0.02	0.61±0.05	0.09±0.01	0.54±0.05	0.09±0.01	5.75±0.46		
DC70327	7.44±0.72	1.55±0.13	10.3±0.5	2.06±0.14	6.53±0.34	1.14±0.06	9.28±0.60	1.36±0.16	66.3±4.6		
DC70328	0.96±0.13	0.14±0.02	0.70±0.05	0.13±0.01	0.39±0.03	0.065±0.007	0.44±0.03	0.073±0.008	3.60±0.34		
	Main content ⁽¹⁰⁻²⁾										
	SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	MnO	P ₂ O ₅	
DC70325	38.15±0.98	5.78±0.16	20.10±0.42	1.12±0.05	5.44±0.26	0.648±0.022	1.12±0.05	0.263±0.014	0.31±0.02	0.055±0.008	
DC70326	27.9±1.8	4.03±0.28	30.0±1.7	9.67±0.64	3.49±0.24	0.485±0.032	0.320±0.024	0.327±0.024	0.070±0.009	0.067Δ 0.055-0.096	
DC70327	48.2±1.7	8.43±0.34	8.44±0.36	1.06±0.05	9.18±0.40	0.96±0.04	1.85±0.07	0.222±0.016	1.20±0.06	0.153±0.014	
DC70328	0.98±0.06	0.45±0.04	68.7±2.6	0.35±0.02	1.69±0.13	0.023±0.007	0.017±0.003	0.046±0.007	0.47±0.04	0.052±0.005	
	F	S									
DC70325	0.074±0.003	13.99±0.32									
DC70326	0.021±0.003	17.36±0.60									
DC70327	2.37±0.14	2.40±0.11									
DC70328	0.036±0.004	4.12±0.12									

Value with * is in percent

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Number	Elements ⁽¹⁰⁻⁶⁾										Unit Size (in g)					
	Ag	As	Bi	Cd	Co	Cu	Ga	Ge	In	Mo						
DC70329	0.67±0.08	15.22*±0.96*	12.86±0.94	2.18±0.22	2.01±0.28	162±11	1.45±0.17	0.39±0.06	2.37±0.28	18.2±1.8	50					
DC70330	94.6±4.6	0.056*±0.003*	3.10±0.38	0.012*±0.001*	17.69±0.94	0.044*±0.003*	30.7±1.9	15.35±0.75	0.77±0.09	0.012*±0.001*	50					
DC70331	7.01±0.66	55.0±3.6	27.2±1.8	2.02±0.36	33.2±1.7	0.29*±0.02*	15.4±0.9	1.82±0.11	1.29±0.32	9.09*±0.28*	50					
DC70332	2.61±0.38	0.212*±0.014*	5.56±0.58	1.45±0.13	26.7±1.7	52.3±2.6	7.10±0.64	2.23±0.16	0.038±0.008	10.3±1.8	50					
	Ni	Pb	Sb	Sc	Se	Sn	Te	Th	Tl	U						
	DC70329	10.0±0.6	0.015*±0.002*	0.050*±0.004*	1.02±0.14	45.3±4.4	0.051*±0.008*	0.51±0.07	0.52±0.06	8.7±1.0	3.02±0.32					
	DC70330	16.8±1.4	7.90*±0.15*	0.011*±0.001*	4.85±0.36	1.96±0.34	16.7±0.7	0.34±0.05	4.53±0.62	0.97±0.07	2.99±0.34					
	DC70331	51.1±3.2	(97.8)	2.97±0.58	9.24±0.52	7.55±0.38	12.12±0.58	1.09±0.46	5.11±0.60	1.37±0.16	3.20±0.30					
DC70332	17.4±2.6	(97)	8.55*±0.36*	4.38±0.28	94.5±8.2	2.04±0.22	0.44±0.19	3.27±0.54	0.50±0.05	1.23±0.13						
	W	Zn*	Zr	Re	La	Ce	Pr	Nd	Sm	Eu						
	DC70329	11.7±1.2	0.040±0.003	4.15±0.36		1.91±0.17	3.62±0.28	0.43±0.05	1.58±0.15	0.34±0.05	0.073±0.008					
	DC70330	0.028*±0.002*	4.72±0.12	(79.8)		16.7±1.4	31.8±2.4	3.69±0.23	13.43±0.86	2.59±0.24	0.58±0.08					
	DC70331	0.037*±0.007*	0.027±0.002	102±11	10.9±0.7	24.4±1.9	44.3±3.8	5.59±0.26	20.0±1.5	3.52±0.50	0.88±0.12					
DC70332	0.031*±0.003*	0.027±0.003	53.5±5.2		14.8±1.7	25.8±1.8	3.18±0.20	12.29±0.74	2.52±0.17	0.50±0.07						
	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y							
	DC70329	0.29±0.04	0.042±0.008	0.20±0.02	0.035±0.004	0.12±0.03	0.017±0.003	0.10±0.02	0.019±0.004	1.09±0.11						
	DC70330	2.28±0.18	0.33±0.03	1.86±0.10	0.37±0.03	1.08±0.04	0.16±0.02	1.08±0.08	0.17±0.02	10.09±0.46						
	DC70331	3.13±0.28	0.46±0.05	2.37±0.28	0.48±0.04	1.37±0.13	0.20±0.03	1.35±0.09	0.21±0.03	13.73±0.98						
DC70332	2.13±0.19	0.36±0.03	2.21±0.18	0.45±0.04	1.30±0.11	0.20±0.02	1.27±0.11	0.20±0.03	12.3±1.0							
	Main content ⁽¹⁰⁻²⁾															
	SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	MnO	P ₂ O ₅						
	DC70329	2.30±0.16	0.44±0.08	3.87±0.26	12.20±0.82	23.9±1.6	0.022±0.003	0.049±0.005	0.020±0.005	0.027±0.002	0.025±0.003					
	DC70330	43.2±1.2	7.04±0.26	13.17±0.32	1.20±0.06	6.24±0.22	1.11±0.04	1.83±0.07	0.276±0.022	0.170±0.008	0.077±0.004					
DC70331	52.7±1.8	11.05±0.38	6.43±0.28	2.04±0.09	3.85±0.18	2.14±0.09	2.28±0.10	0.41±0.04	0.110±0.008	0.169±0.028						
DC70332	65.4±3.6	4.94±0.30	2.22±0.14	2.17±0.15	4.24±0.26	0.089±0.009	1.55±0.11	0.180±0.017	0.112±0.010	0.070±0.006						
	F	S														
	DC70329	0.015±0.002	7.18±0.19													
	DC70330	0.45±0.03	11.45±0.24													
	DC70331	0.37±0.08	7.97±0.22													
DC70332	0.060±0.004	3.59±0.15														
Value with * is in percent																
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	CaO	TiO ₂	P ₂ O ₃	MnO	Na ₂ O	K ₂ O	H ₂ O	CO ₂	Unit Size (in g)	
NCS DC 71301	Rock	54.48	17.72	6.04	1.23	0.65	1.39	0.48	0.018	0.12	7.16	7.48	2.38	0.26	50	
NCS DC 71302	Rock	63.06	16.1	4.51	0.19	0.84	2.47	0.8	0.36	0.089	3.06	5.17	1.79	1.03	50	
NCS DC 71303	Rock	59.68	16.56	2.64	3.08	2.81	4.72	0.77	0.34	0.094	4.05	3.50	0.88	0.15	50	
NCS DC 71304	Rock	35.69	14.14	9.90	13.36	5.25	9.86	7.69	0.028	0.193	2.11	0.15	1.09	0.12	50	
NCS DC 71305	Rock	72.78	12.96	1.14	1.86	0.16	0.59	0.30	0.045	0.14	2.57	5.43	1.18	0.52	50	
NCS DC 71306	Rock	0.62	0.10	0.04	0.15	21.8	30.02	0.015	0.006	0.010	(0.003)	0.038	(0.34)	46.77	50	
		S	Cl	F	C(T)											
	NCS DC 71301	Rock	0.011	0.059	0.048	(0.093)										
	NCS DC 71302	Rock	0.023	0.016	0.112	(0.29)										
	NCS DC 71303	Rock	0.011	0.023	0.084	(0.057)										
	NCS DC 71304	Rock	0.37	0.006	0.006	(0.039)										
	NCS DC 71305	Rock	0.009	(0.002)	0.13	(0.15)										
NCS DC 71306	Rock		0.012	0.014	(12.88)											

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Number		Name	Chemical Composition(µg/g)														Unit Size (in g)
			Ta	Te	Th	Tl	U	Ag	As	W	B	Ba	Cu	Zr	Ga		
NCS DC 71301	Rock		1.96	0.012	79.3	0.76	14.6	(0.033)	6.27	1.24	31.8	251	11.8	0.154*	35.8		
NCS DC 71302	Rock		1.42	(0.007)	16.7	1.02	3.04	0.17	5.96	1.62	10.8	1053	9.1	335	19.8		
NCS DC 71303	Rock		0.62	0.011	10.9	0.39	1.40	0.066	0.4	0.19	3.92	0.190*	8.8	224	20.8		
NCS DC 71304	Rock		(0.56)	0.010	(0.28)	0.07	(0.086)	0.05	(0.21)	(0.10)	1.84	86.2	28.3	29	23.7		
NCS DC 71305	Rock		2.41	(0.0009)	(27.1)	0.83	4.83	0.08	0.7	1.10	3.5	506	10.9	403	20.5		
NCS DC 71306	Rock		(0.18)	(0.012)	0.11	(0.070)	0.16	0.04	0.23	0.11	20.5	44.3	30.2	3.0	(0.21)		
			Ge	Hg	Li	Pb	Sc	Sr	Zn	Br	Cd	Sb	Ce	Dy	Eu	V	
NCS DC 71301	Rock		0.95	0.005	32.9	196	2.22	0.016*	112	1.21	0.07	0.15	242	4.70	2.35	179	
NCS DC 71302	Rock		1.11	0.014	17.5	97.7	7.52	318	164	(0.55)	0.61	1.34	117	5.32	1.96	64.3	
NCS DC 71303	Rock		1.00	0.035	16.2	19.8	10.3	1198	85.4	(0.34)	0.08	0.06	112	3.20	1.91	104	
NCS DC 71304	Rock		1.06	(0.005)	1.94	(5.16)	22.5	612	118	(0.32)	0.09	(0.04)	4.2	1.11	0.74	768	
NCS DC 71305	Rock		1.17	0.005	12.7	33.3	5.15	43.0	86.3	(0.25)	0.14	0.38	163	8.19	1.18	3.8	
NCS DC 71306	Rock		0.15	(0.004)	2.30	(4.44)	0.098	27.0	11.7	0.84	0.07	(0.04)	3.58	0.19	0.05	(21)	
			Gd	Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Be		
NCS DC 71301	Rock		7.0	0.96	14.9	0.43	65.1	9.7	1.02	0.46	2.56	2.48	22.5	24.7	17.2		
NCS DC 71302	Rock		6.54	1.10	62.5	0.49	47.2	8.63	0.99	0.5	3.15	2.93	13.2	28.0	3.64		
NCS DC 71303	Rock		5.09	0.60	60.5	0.24	48.1	7.74	0.68	0.26	1.56	1.57	13.2	15.5	2.11		
NCS DC 71304	Rock		1.31	0.20	1.71	0.06	4.10	1.22	0.20	0.09	0.36	0.47	0.84	4.9	(0.98)		
NCS DC 71305	Rock		9.47	1.64	82.7	0.67	64.5	11.7	1.51	0.73	4.51	4.31	18.4	42.5	4.09		
NCS DC 71306	Rock		0.18	0.04	1.34	0.019	1.39	0.25	0.05	(0.040)	0.09	0.09	(0.44)	(1.40)	(0.22)		
			Bi	Co	Cr	Cs	Hf	I	In	Mo	Nb	Ni	Pb	Se	Sn		
NCS DC 71301	Rock		0.37	4.59	3.6	2.05	34.0	0.14	0.15	0.26	66.9	1.75	130	0.05	6.50		
NCS DC 71302	Rock		0.09	7.9	7.7	7.16	7.5	0.07	0.11	0.95	20.8	12.6	183	0.03	3.12		
NCS DC 71303	Rock		0.05	15.6	37.6	0.97	5.2	(0.078)	0.08	0.47	10.6	24.4	70.1	0.03	1.44		
NCS DC 71304	Rock		0.04	93.0	14.5	(0.17)	0.65	0.08	0.12	(0.94)	9.3	69	(4.79)	0.26	0.89		
NCS DC 71305	Rock		0.06	2.40	7.3	3.34	10.8	(0.093)	0.09	2.46	34.3	64.5	213	0.040	3.35		
NCS DC 71306	Rock		0.03	3.88	2.6	0.07	(0.10)	0.23	(0.066)	(0.024)	(2.77)	241	(1.42)	0.08	0.53		
Number		Name	Chemical Composition (Percent)														Unit Size (in g)
			Ag	Cd	Cu	Fe	S	Sb	Sn	Zn	Pb						
NCS DC 71307	Sulfied Mineral					46.08	52.72									5	
NCS DC 71309	Sulfied Mineral		0.97				13.30	0.43	0.11		84.26					5	
NCS DC 71310	Sulfied Mineral			0.15	0.10	2.14	32.33			62.51	0.099					5	
			Chemical Composition (µg/g)														
			Ag	As	Bi	Cd	Co	Ga	Ge	In	Sb	Se	Sn	Te	Zn		
NCS DC 71307	Sulfied Mineral		0.59	(14.4)	2.9	0.71	(3.9)	0.44	(0.2)		1.1	5.8	(2.7)	0.95	219		
NCS DC 71309	Sulfied Mineral			5.3	1.4	16.5	(0.4)	(0.3)	1.47	0.29				(0.07)	533		
NCS DC 71310	Sulfied Mineral		5.0	(3.3)	6.1		491	251	6.0	21.0	249	(3.0)	(0.2)	(0.3)			
			Ti	Mn	Ni	Pb	Cu	Fe									
NCS DC 71307	Sulfied Mineral			28.9	34.0	(23.4)	431										
NCS DC 71309	Sulfied Mineral		0.65				62.4	127									
NCS DC 71310	Sulfied Mineral			169	43.2												

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Number		Name	Chemical Composition(Percent)												Unit Size (in g)
			Al ₂ O ₃	CaO	FeO	K ₂ O	Na ₂ O	MgO	Mn	P ₂ O ₅	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI	
NCS DC 71312	Rock		3.73	12.64	3.71	0.49	(0.10)	17.56	0.09	0.30	35.88	6.53	0.71	20.73	70
NCS DC 71313	Rock		13.19	(0.10)	(0.04)	6.22	1.6	0.13	0.013	0.18	76.40	0.24	0.61	1.27	70
			CO ₂	Cl	F	H ₂ O ⁺	SO ₃	Ba							
NCS DC 71312	Rock		(16.78)	(0.04)	(0.11)	(4.47)	0.68	0.177							
NCS DC 71313	Rock		(0.05)		(0.03)	(1.02)	0.07								
			Chemical Composition(μg/g)												
			Ag	As	B	Ba	Be	Bi	Cd	Ce	Co	Cr	Cs	Cu	
NCS DC 71312	Rock		(0.06)	3.5	(31.8)		1.3	(0.10)	0.46	12.7	40.0	776	5.2	26.2	
NCS DC 71313	Rock		(0.09)	3.1	(1.9)	728	1.3	(0.07)	0.15	(5.0)	(1.5)	4.8	1.8	4.2	
			Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg	Ho	La	Li	Lu	
NCS DC 71312	Rock		2.6	1.2	1.6	7.1	4.7	0.89	4.9	0.010	0.49	69.8	75.7	0.16	
NCS DC 71313	Rock		0.20	0.12	(0.16)	13.5	0.22	1.48	(0.80)	(0.008)	(0.04)	(3.3)	14.4	0.03	
			Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sb	Sc	Se	Sm	Sn	
NCS DC 71312	Rock		1.4	56.8	49.0	542	20.7	13.8	28.4	(0.22)	10.9	0.10	6.5	1.7	
NCS DC 71313	Rock		0.29	14.6	1.51	(1.6)	34.6	0.48	155	0.64	(2.85)	(0.015)	(0.24)	3.5	
			Sr	Ta	Tb	Th	Tm	U	V	W	Y	Yb	Zn	Zr	
NCS DC 71312	Rock		262	3.9	0.54	10.8	0.17	2.2	89.4	2.4	11.6	1.1	190	175	
NCS DC 71313	Rock		45.5	1.3	(0.04)	0.66	(0.02)	(0.75)	(44.5)	3.2	1.6	0.21	20.3	22.6	
Number		Name	Chemical Composition(Percent)												
			No ₂ O ₃	K ₂ O	SiO ₂	ZnO	PbO	B ₂ O ₃	Al ₂ O ₃	MgO	TiO ₂	Fe ₂ O ₃	CaO		
NCS DC 71401	Zinc Oxide for EPMA				(0.04)	99.80			(0.10)						
NCS DC 71402	Potassium Niobat for EPMA		74.10	25.89											
NCS DC 71403	Lead Glass for EPMA			3.12	32.70		64.4								
NCS DC 71404	Boron Glass for EPMA				37.11			(11.21)	35.24	10.28	(0.42)	(0.44)	(0.77)		
NCS DC 71405	Kyanite for EPMA				37.06				62.70						
NCS DC 71406	Pyrite for EPMA														
NCS DC 71407	Olivine for EPMA				40.73					50.05			(0.04)		
NCS DC 71408	Feldspar for EPMA			4.51	65.97				19.88	(0.02)			0.89		
NCS DC 71409	Chromite for EPMA				(0.15)				(7.36)	12.38					
NCS DC 71410	Quartz for EPMA				99.98										
NCS DC 71411	Garnet for EPMA				36.31				20.05	0.08			10.21		
			Na ₂ O	Cr ₂ O ₃	MnO	Fe ₂ O ₃	TFe ₂ O ₃	FeO	S	P ₂ O ₅					
NCS DC 71404	Boron Glass for EPMA		(1.27)							(0.025)					
NCS DC 71405	Kyanite for EPMA														
NCS DC 71406	Pyrite for EPMA								53.19						
NCS DC 71407	Olivine for EPMA				(0.17)			8.67							
NCS DC 71408	Feldspar for EPMA		7.08												
NCS DC 71409	Chromite for EPMA			64.34	(0.10)	(1.68)		14.04							
NCS DC 71410	Quartz for EPMA							(0.02)							
NCS DC 71411	Garnet for EPMA				29.71		(15.25)	13.4							

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Number	Name	Chemical Composition(%)												Unit Size (in g)
		Li ₂ O	Al ₂ O ₃	CaO	FeO	K ₂ O	LOI	MgO	MnO	Na ₂ O	P ₂ O ₅	SiO ₂	TFe ₂ O ₃	
NCS DC 71320	Spodumene	6.3	25.35	0.14	(0.26)	0.17	0.97	0.06	0.16	1.15	0.027	64.2	0.75	50g
NCS DC 71321	Spodumene	6.23	25.28	0.07	(0.16)	0.22	(0.73)	0.035	0.15	1.23	0.025	64.36	0.62	50g
NCS DC 71322	Spodumene	1.3	15.88	0.27	(0.14)	2.38	(1.02)	0.048	0.087	3.81	0.23	74.27	0.36	50g
		Chemical Composition(mg/g)												
		Ba	Be	Bi	Ce	Cs	Hf	La	Nb	Ni	Rb	S	Sc	
NCS DC 71320	Spodumene	12.3	39.6	5.45	(0.69)	70	2.92	(0.34)	11.4	2.03	98	(70)	(0.44)	6.8
NCS DC 71321	Spodumene	3.21	0.106*	2.97	(0.22)	0.081*	(3.1)	(0.1)	10.8	1.23	145	(50)	(0.38)	3.9
NCS DC 71322	Spodumene	4.8	144	1.21	0.6	113	4.79	0.357	76	(0.87)	0.098*	(60)	(0.46)	45
		Chemical Composition(mg/g)												
		Ta	Th	Ti	U	V	W	Y	Yb	Zn	Zr			
NCS DC 71320	Spodumene	12.9	1.39	96	0.75	(4.1)	2.47	(1.8)	(0.035)	114	84			
NCS DC 71321	Spodumene	15.8	1.07	67	0.77	(2.4)	1.88	(1.7)	(0.016)	70	76			
NCS DC 71322	Spodumene	51	0.71	47.3	9.6	(3)	2	2.94	(0.028)	80	112			
Number	Name	Pb	S	Zn	Hg	BaO	SO ₃	PbO	CO ₂	WO ₃	CaO	Nb ₂ O ₃	Ta ₂ O ₃	Unit Size (in g)
NCS DC 71412	Galena for EPMA	86.35	13.44											
NCS DC 71413	Sphalerite for EPMA		32.76	66.33										
NCS DC 71414	Cinnabar for EPMA		13.63		86.00									
NCS DC 71415	Barite for EPMA					65.56	34.28							
NCS DC 71416	Cerussite for EPMA							83.36	(16.82)					
NCS DC 71417	Scheelite for EPMA									80.45	19.39			
NCS DC 71418	Manganocolumbite for EPMA											54.74	25.92	
		Chemical Composition(Percent)												
		FeO	MnO											
NCS DC 71418	Manganocolumbite for EPMA	6.65	12.47											
Number	Name	Cd	Te	Se	Ga	As	Zn	In	Sb	P				Unit Size (in g)
NCS DC 71419	Cadmium Telluride for EPMA	46.87	53.39											
NCS DC 71420	Cadmium Selenide for EPMA	58.48		40.88										
NCS DC 71421	Cadmium Arsenide for EPMA				48.07	51.95								
NCS DC 71422	Zinc Selenide for EPMA			54.44			45.38							
NCS DC 71423	Indium Antimonide for EPMA							48.59	51.45					
NCS DC 71424	Indium Phosphide for EPMA							78.51		21.12				
NCS DC 71425	Indium Arsenide for EPMA					39.60		60.97						
Number	Name	P ₂ O ₅	Sc ₂ O ₃	La ₂ O ₃	Ce ₂ O ₃	Pr ₂ O ₃	Nd ₂ O ₃	Sm ₂ O ₃	Gd ₂ O ₃	Ho ₂ O ₃	Yb ₂ O ₃	Lu ₂ O ₃	Unit Size (in g)	
NCS DC 71426	Sc P 5014 for EPMA	85.6	16.42											
NCS DC 71427	La P 5014 for EPMA	67.70		31.25										
NCS DC 71428	Ce P 5014 for EPMA	68.32			31.7									
NCS DC 71429	Pr P 5014 for EPMA	68.67				31.83								
NCS DC 71430	Nd P 5014 for EPMA	68.12					32.2							
NCS DC 71431	Sm P 5014 for EPMA	68.87						32.07						
NCS DC 71432	Gd P 5014 for EPMA	66.6							33.71					
NCS DC 71433	Ho P 5014 for EPMA	65.37								34.52				
NCS DC 71434	Yb P 5014 for EPMA	64.1									35.88			
NCS DC 71435	Lu P 5014 for EPMA	63.44										36.08		

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Number	Name	Chemical Composition(%)												Unit Size (in g)
		Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	TiO ₂	L.O.L	K ₂ O	Na ₂ O	CaO	MgO	P ₂ O ₅	H ₂ O+	S	
NCS DC 71314	Bauxite	71.06	7.8	1.82	3.08	14.62	0.2	(0.06)	0.40 ▲	0.14	0.25	13.81	0.039	50
NCS DC 71315	Bauxite	54.94	15.24	9.04	2.46 ▲	15.01	0.31 ▲	(0.07)	2.22	0.26	0.21	13.07	0.046	50
NCS DC 71316	Bauxite	63.17	16.62	0.68	3.28	13.67	1.00 ▲	0.1	0.17 ▲	0.33	0.25	13.17	0.038	50
NCS DC 71317	Bauxite	42.97	39.03	0.41	2.06	14.35	0.19	(0.04)	(0.12)	0.31	0.14 ▲	13.96	0.027	50
NCS DC 71318	Bauxite	90.63	3.2	1.31	3.80 ▲	0.12	0.06 ▲	(0.05)	0.14	(0.08)	0.19			50
NCS DC 71319	Bauxite	75.13 ▲	19.44	1.24	3.22	0.17	0.17	(0.06)	0.16	0.1	0.16			50
		MnO	Li	Cu	Pb	Zn	Sr	Zr	V	Ga	Cr			
NCS DC 71314	Bauxite	190	80.6	30.6	116	24	691	886	198	70	215			
NCS DC 71315	Bauxite	340	111	44	107	34.5	619 ▲	643	209	65 ▲	193			
NCS DC 71316	Bauxite	(18)	342 ▲	48	224	26.2 ▲	948	649	90	46.3	90			
NCS DC 71317	Bauxite	(20)	567	26.4	101	35.8	512	436	73.6	26.9	76			
NCS DC 71318	Bauxite	(40)	35.1	19.5	26.7	7.4	345	0.116*	210	82	267			
NCS DC 71319	Bauxite	(30)	147	24.8	35.7	17.7	292	986	216	72	233			
Number	Name	Chemical Composition(%)												Unit Size (in g)
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	MnO	P ₂ O ₅	Cr ₂ O ₃	LOI	
NCS DC71325	Quartzite	92.93	2.43	0.62	1.2	0.29	0.6	0.28	0.1	0.015	0.025	0.0077	1.35	80
NCS DC71326	Quartzite	95.97	1.33	0.61	0.59	0.15	0.28	0.13	0.059	0.008	0.018	0.0083	0.69	80
NCS DC71327	Quartzite	99.18	0.29	0.16	0.036	0.022	0.05	0.01	0.014	0.0049	0.0036	0.0053	0.14	80
		As	Ba	Be	Bi	Cd g	Ce	Cl	Co	Cu	Hg	La	Li	Mo
NCS DC71325	Quartzite	0.89	84.2	0.41	0.036	0.037	16.7	(34)	1.8	14.6	(0.003)	8.8	3.4	1.6
NCS DC71326	Quartzite	1.3	56.8	0.21	0.05	0.025	19.3	(38)	1.4	13.4	(0.002)	9.3	2.7	2.1
NCS DC71327	Quartzite	0.48	17.4	0.09	0.034	0.015	1.1	(15)	1.6	8.9	(0.002)	0.54	2.5	3.8
		Ni	Pb	Rb	Sb	Sr	Th	U	V	W	Zn	Zr		
NCS DC71325	Quartzite	21.5	39.7	16.7	0.2	33.9	2.9	0.58	11.9	0.47	11.2	93		
NCS DC71326	Quartzite	23.9	69.4	10.3	0.22	20	1.8	0.48	7.4	0.27	7.8	53		
NCS DC71327	Quartzite	15.8	31.7	3	0.2	3	0.14	0.1	1.8	0.19	3.7	(1.7)		
Number	Name	Chemical Composition(%)												Unit Size (in kg)
		Al ₂ O ₃	SiO ₂	TFe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	MnO	P ₂ O ₅	SO ₃	LOI	
NCS DC72001	Kaolin	36.53	44.67	0.63	0.14	0.17	0.14	0.7	0.11	0.005	0.17	3.13	16.09	1
NCS DC72002	Kaolin	27.16	58.47	0.8	0.3	1.01	0.29	0.9	0.19	0.019	0.22	0.43	10.11	1
		pH (25°C)	Ture density (g/cm ³)	Dried whiteness (%)		Oil absorption (%)		Specific area (m ² /g)		Liquid limit (%)		Plastic limit (%)		
NCS DC72001	Kaolin	4.64	2.6	82.3		38.5		26.5		50.1		32		
NCS DC72002	Kaolin	7.52	2.63	76.5		39.2		12.8		37.5		25.6		
		Plastic index												
NCS DC72001	Kaolin	18.1												
NCS DC72002	Kaolin	11.9												

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Number	Name	Chemical Composition(%)												Unit Size (in kg)		
		Al ₂ O ₃	SiO ₂	TFe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	MnO	P ₂ O ₅	SO ₃	LOI			
NCS DC 72003	Bentonite	18.11	59.71	2.64	0.34	4.34	3.51	0.6	0.37	0.12	0.11	0.06	10.08	1		
NCS DC 72004	Bentonite	23.35	56.21	4.6	1	0.95	3.04	0.31	0.11	0.035	0.054	0.025	10.25	1		
NCS DC 72005	Bentonite	17.06	67.63	3.36	0.24	0.99	1.99	1.37	2.4	0.023	0.036	0.024	4.72	1		
NCS DC 72006	Bentonite	14.24	72.73	1.97	0.13	0.89	2.57	0.6	1.9	0.02	0.026	0.29	4.65	1		
		pH (25°C)	Decolourization capacity	Ture density (g/cm ³)	Methylene blue index (mmol/100g)	Colloid index (mL/15g)	Swell capacity (mL/g)	Water absorption (%)								
		8.64	18	2.63	122.8	52	8	180								
		4.49	120	2.68	96.9	39	4	165								
		10.09	14.6	2.72	68.4		15	452								
NCS DC 72006	Bentonite	10.04	20.8	2.7	82.5		43	684								
		E (1/2 Ca ²⁺) (mmol/100g)	E (1/2 Mg ²⁺) (mmol/100g)	E (Na ⁺) (mmol/100g)	E (K ⁺) (mmol/100g)											
NCS DC 72003	Bentonite	78.7	3.91	0.96	0.37											
NCS DC 72004	Bentonite	28.4	9.42	1.71	0.85											
NCS DC 72005	Bentonite	8.04	2.45	40.2	1.14											
NCS DC 72006	Bentonite	12.7	3.74	42.2	0.91											
Number	Name	Chemical Composition(%)												Unit Size (in kg)		
		Al ₂ O ₃	SiO ₂	TFe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	MnO	P ₂ O ₅	CO ₂	LOI			
NCS DC72007	Attapulgitte Clay	10.2	56.29	4.41	0.62	6	7.11	1.16	0.16	0.31	0.16	5.17	13.32	1		
NCS DC72008	Attapulgitte Clay	8.86	60.02	4.48	0.6	1.27	11.55	0.87	0.071	0.068	0.49	0.68	11.59	1		
		pH (25°C)	Decolourization capacity	Ture density (g/cm ³)	Methylene blue index (mmol/100g)	Dried whiteness (%)	Oil absorption (%)	Water absorption (%)								
		8.64	79.7	2.64	36.3	48.5	69.2	210								
		8.4	74.7	2.56	15.7	59.6	103.1	211								
		E (1/2 Ca ₂ +) (mmol/100g)	E (1/2 Mg ₂ +) (mmol/100g)	E (Na+) (mmol/100g)	E (K+) (mmol/100g)											
NCS DC72007	Attapulgitte Clay	14.8	8.54	0.69	1.01											
NCS DC72008	Attapulgitte Clay	6.62	3.28	0.36	0.44											
Number	Name	Chemical Composition (Percent)														Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	S	P	Ti	Mn	Cu	
NCS DC 73001	Iron ore	20.17	60.86	3.57	(7.49)	1.68	2.84	0.28	0.53	(1.18)	0.051	0.045	0.085	0.168	0.0028	50
NCS DC 73002	Iron ore	30.34	43.68	3.43	5.8	1.44	2.17	0.18	0.85	(2.08)	0.066	0.094	0.091	0.200	0.0023	50
NCS DC 73003	Iron ore	40.51	33.93	2.27	(14.5)	2.22	2.00	0.16	0.27	(1.37)	0.95	0.032	0.067	0.122	0.028	50
NCS DC 73004	Iron ore	49.50	16.30	2.58	7.66	0.98	0.91	0.035	0.92	(2.1)	0.065	0.138	0.083	0.198	0.0014	50
NCS DC 73005	Iron ore	56.60	11.48	0.99	20.05	3.62	1.36	0.058	0.071	(1.63)	2.44	0.017	0.043	0.076	0.068	50
NCS DC 73006	Iron ore	61.46	6.65	1.68	(0.35)	0.77	0.52	0.081	0.098	(0.046)	0.0067	0.019	1.12	0.072	0.0028	50
NCS DC 73007	Iron ore	62.51	10.93	1.02	21.54	0.28	0.18	0.016	0.038	(0.41)	0.0058	0.11	0.059	0.061	(0.0015)	50
NCS DC 73009	Iron ore	66.87	5.05	0.99	23.14	0.22	0.14	0.012	0.030	(0.44)	0.0055	(0.011)	0.059	0.071	0.0015	50
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		Cr ₂ O ₃	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂	S	Ni	Co	
NCS DC 73010	Chromite	17.59	20.30	11.86	10.52	(8.68)	28.12	0.44	(0.13)	0.046	(10.7)	(0.6)	0.037	0.188	0.0124	50
NCS DC 73011	Chromite	34.44	12.24	11.37	11.81	(8.5)	23.32	0.32	0.073	0.026	(6.4)	(0.46)	0.024	0.175	0.14	50
NCS DC 73012	Chromite	46.56	5.06	11.60	15.34	(12.0)	17.92	0.46	0.018	(0.010)	2.5	(1.2)	0.076	0.134	0.016	50
NCS DC 73013	Chromite	57.80	1.10	10.53	13.70	(8.3)	16.45	(0.13)	(0.016)	(0.004)	(0.59)	(0.14)	(0.005)	0.16	0.016	50
		P	Ti	Mn	V											
NCS DC 73010	Chromite	0.0031	0.085	0.088	0.043											
NCS DC 73011	Chromite	0.0020	0.100	0.090	0.044											
NCS DC 73012	Chromite	(0.0013)	0.070	0.135	0.064											
NCS DC 73013	Chromite	(0.0012)	0.122	0.097	0.048											

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Number	Name	Chemical Composition(μg/g)										Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce		
NCS DC 73014	Stream Sediment	0.14±0.01	14.3±0.9	53±7	455±9	2.2±0.1	0.51±0.03	0.8±0.2	0.34±0.02	47±2		70
NCS DC 73015	Stream Sediment	0.050±0.007	3.6±0.4	48±6	600±20	3.6±0.4	0.48±0.03	0.61±0.13	0.093±0.009	24±2		70
NCS DC 73016a	Stream sediments	0.79±0.09	53±4	84±11	698±24	3.0±0.3	2.1±0.2	4.8±0.7	4.9±0.4	63±4		
		Chemical Composition(μg/g)										
		Cl	Co	Cr	Cs	Cu	Dy	Er	Eu	F		
NCS DC 73014	Stream Sediment	53±5	10.2±0.4	61±4	5.8±0.3	132±5	4.1±0.3	2.5±0.2	1.20±0.06	550±21		
NCS DC 73015	Stream Sediment	33±3	4.4±0.2	21±33	7.2 ± 0.2	7.2±0.52	1.7±0.1	0.93±0.09	0.62±0.03	279±8		
NCS DC 73016a	Stream sediments	78±11	9±1	34±4	6.1±0.5	32±2	5.0±0.4	3.0±0.4	1.0±0.2	450±41		
		Chemical Composition(μg/g)										
		Ga	Gd	Ge	Hf	Hg	Ho	I	In	La		
NCS DC 73014	Stream Sediment	14.6±0.6	4.1±0.2	1.87±0.14	3.8±0.8	0.018±0.006	0.83±0.08	0.47±0.08	0.14±0.01	24±1		
NCS DC 73015	Stream Sediment	12.4±0.5	1.7±0.1	1.64 ±0.14	2.1±0.4	(0.007)	0.33±0.02	0.27±0.08	0.018±0.004	13.9±1.0		
NCS DC 73016a	Stream sediments	17±2	5.3±0.5	1.2±0.2	5.6±0.8	0.12±0.01	1.0±0.2	2.1±0.3	0.15±0.03	35±2		
		Chemical Composition(μg/g)										
		Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P		
NCS DC 73014	Stream Sediment	20.7±2.0	0.42±0.04	0.142±0.004*	0.94±0.04	150	9.4 ± 07	22±1	18.9±0.7	568±17		
NCS DC 73015	Stream Sediment	40 ± 2	0.16±0.02	290±7	0.33±0.04	79	5.1±0.7	9.8±0.4	7.0±0.6	335±15		
NCS DC 73016a	Stream sediments	24±1	0.50±0.06		1.4±0.2		12±2	30±1	16±1	0.108±0.006		
		Chemical Composition(μg/g)										
		Pb	Pr	Rb	S	Sb	Sc	Se	Sm	Sn		
NCS DC 73014	Stream Sediment	210±6	5.9±0.4	96±4	432±60	1.18±0.07	11.4±0.3	0.47 ± 0.10	4.5±0.2	2.5±0.4		
NCS DC 73015	Stream Sediment	31±23	2.9±0.3	118±3	87±10	0.16±0.03	4.9±0.4	0.053±0.013	1.9±0.1	2.3±0.2		
NCS DC 73016a	Stream sediments	267±9	8.0±0.7	138±7	692±80	2.0±0.2	7.1±0.6	0.36±0.04	5.8±0.3	11.5±1.0		
		Chemical Composition(μg/g)										
		Sr	Ta	Tb	Te	Th	Ti(%)	Tl	Tm	U		
NCS DC 73014	Stream Sediment	171±5	0.65±0.07	0.68±0.05	(0.05)	8.3±0.9	0.23±0.01	0.91±0.07	0.4±0.04	2.2±0.2		
NCS DC 73015	Stream Sediment	253±13	0.72±0.10	0.29±0.02	(0.02)	4.1±0.6	0.146±0.011	0.83±0.08	0.16±0.02	1.9±0.1		
NCS DC 73016a	Stream sediments	148±5	1.1±0.2	0.84±0.07	-0.064	10.9±1.0		1.6±0.2	0.5±0.1	4.8±0.3		
		Chemical Composition(μg/g)										
		V	W	Y	Yb	Zn	Zr	Mn*	N*	Ti*		
NCS DC 73014	Stream Sediment	77±3	2.0±0.1	23±2	2.6±0.3	209±6	132±4					
NCS DC 73015	Stream Sediment	31±1	0.66±0.08	9.7±0.7	1.0±0.1	27±2	71±7					
NCS DC 73016a	Stream sediments	48±5	3.6±0.5	30±2	3.2±0.4	962±42	187±7	0.17±0.01	0.25±0.02	0.249±0.010		
		Chemical Composition(%)										
		SiO ₂	Al ₂ O ₃	TF ₂ O ₃	C _{org}	L.O.I.						
NCS DC 73014	Stream Sediment	69.40±0.29	11.06±0.13	7.00±0.10								
NCS DC 73015	Stream Sediment	74.33±0.23	11.65±0.13	1.79±0.05								
NCS DC 73016a	Stream sediments	62.72±0.37	12.97±0.34	3.90±0.16	-3.82	10.66±0.54						
		Chemical Composition(%)										
		FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O+	CO ₂	Corg	TC		
NCS DC 73014	Stream Sediment	(1.83)	1.70±0.03	2.96±0.04	1.40±0.02	2.35±0.03	2.31±0.09	(0.76)	0.28±0.03	(0.48)		
NCS DC 73015	Stream Sediment	(0.57)	0.71±0.04	2.85±0.08	2.85±0.04	2.96±0.05	0.98±0.13	(1.34)	(0.08)	(0.46)		
NCS DC 73016a	Stream sediments	-2.16	1.70±0.06	1.26±0.04	2.02±0.07	3.28±0.11	-3.71			4.29±0.17		

Note: value with * is in percent; value with ** is calculated value; value in () is for reference only. Value behind "±" is uncertainty

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Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73035	Rock	0.046	4.7	11.5	605	0.99	0.061		0.071	52.0	72.9	7.6	27.7	1.8	
NCS DC73036	Rock	0.069	0.49		649	1.37			0.092	62.9	71.0	21.1	96.7	(0.28)	
NCS DC73037	Rock	0.085	1.8	4.7	277	1.99	0.031		0.098	104	51.0	38.7	98.1	0.52	
NCS DC73038	Rock	0.086	0.84	(11)	49.2	0.28	0.030		0.082	12.2	244	149	(0.49*)	1.4	
NCS DC73039	Rock	0.18	10.1	31.3	118	1.10	0.27	(1.4)	3.2	23.7	48.4	4.9	185	2.2	
NCS DC73040	Rock	0.24	6.1		35.9	0.13	0.10		(0.035)	42.9		2.3	20.6	0.43	
		Chemical Composition(µg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73035	Rock	4.9	4.9	3.0	1.5	278	10.6	5.4	0.51	3.3	9.9	1.06		0.025	
NCS DC73036	Rock	33.5	3.7	2.0	1.6	424	21.5	4.9	0.95	4.7		0.75		0.049	
NCS DC73037	Rock	240	8.9	4.3	3.3	801	25.0	10.3	1.27	9.7	(5)	1.66		0.104	
NCS DC73038	Rock	75.6	1.2	0.63	0.38	197	4.9	1.2	0.92	1.1	3.5	0.23		0.023	
NCS DC73039	Rock	40.9	2.5	1.6	0.43	544	6.8	2.2	0.78	2.9	220	0.54	0.37	0.032	
NCS DC73040	Rock	8.6	0.88	0.55	0.17	(80)	(1.6)	0.66		1.4	12.2	0.18	1.03	0.015	
		Chemical Composition(µg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73035	Rock	30.0	15.2	0.40	0.21	0.33		(6)	26.6	13.5 [▲] 12.8-15.5	252	12.3	6.6	68.2	
NCS DC73036	Rock	29.4	12.1	0.30	816	0.64		7.0	33.4	44.8	0.11	7.4	8.5 [▲] 12.8-15.5	19.3	
NCS DC73037	Rock	48.0	11.3	0.51	0.14	1.19		45.1	56.6	69.7	0.19	6.2	13.7	27.1	
NCS DC73038	Rock	5.8	5.9	0.10	0.14	0.19		5.5	6.4	1269	227	(3.3)	1.6	6.9	
NCS DC73039	Rock	13.2	12.6	0.28	141	71.2	0.22	6.9	11.4	77.4	661	10.2	3.1	32.0	
NCS DC73040	Rock	3.5	0.59	0.12	67	0.67			2.9	8.1	(50)	15.1	0.87		
		Chemical Composition(µg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	
NCS DC73035	Rock	(690)	0.093	6.7	0.040	5.4	1.1	252	0.42 [▲] 0.37-0.66	0.84		3.7	0.17	0.43	
NCS DC73036	Rock	326 [▲] 314-414	0.080	16.7	0.094	6.1	1.5	818		0.71	(0.02)	0.58	0.40	0.10	
NCS DC73037	Rock	115	0.23	26.6	(0.15)	11.6	3.2	271	3.2	1.63		5.5	2.44	(0.06)	
NCS DC73038	Rock	514	0.13	10.6	0.20	132 [▲] 1.29-1.58	(0.9)	37.9		0.21	(0.04)	0.95	0.25	(0.05)	
NCS DC73039	Rock	0.73* [▲] 0.64-0.76*	2.01	5.4	29.7	2.3	1.6	156	0.48	0.39	(0.06)	4.1	0.13	1.80	
NCS DC73040	Rock	(76)	0.68	2.4	0.32	0.76	(1)			0.13		1.1	264	(0.05)	
		Chemical Composition(µg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *	Al ₂ O ₃ *	TFe ₂ O ₃	FeO*	MgO*	
NCS DC73035	Rock	0.43	68.0	33.2	0.54	31.1	2.4	33.4	114	46.40	8.88	1.69 [▲] 1.66-2.02	(0.5)	0.88	
NCS DC73036	Rock	0.32	(0.25)	115	0.15	17.8	1.8	86.2	173	58.47	17.14	6.85	3.89	3.26	
NCS DC73037	Rock	0.58	1.56	389	0.54	37.5	3.4	142	365	47.95	12.68	13.76	6.16	5.11	
NCS DC73038	Rock	0.10	0.32	70.3	(0.17)	5.9	0.58	89.0	39.2	37.24	2.80	13.27	4.76	32.26	
NCS DC73039	Rock	0.28	12.5	614	0.70	16.9	1.7	46.2	108	71.51	5.21	1.79		2.62	
NCS DC73040	Rock	0.11	1.9	28.1	0.53	5.6	0.74	11.7	53.3	94.34	1.87	0.66		(0.05)	
		Chemical Composition(µg/g)													
		CaO*	Na ₂ O	K ₂ O	H ₂ O**	CO ₂	Corg*	TC*	LOI*						
NCS DC73035	Rock	20.13	1.19	2.27	(2.5)	15.03	(0.1)	4.25	17.48						
NCS DC73036	Rock	5.90	4.77	1.51			(0.1)	(0.15)	0.68						
NCS DC73037	Rock	7.58	3.61	1.19	2.79		(0.25)	(0.11)	2.55						
NCS DC73038	Rock	2.17		0.17	(8.6)	(1.3)	0.34	(0.42)	10.34						
NCS DC73039	Rock	4.11	0.70	0.78	(2)	5.25	4.82	5.97 [▲] 5.87-6.05	12.09						
NCS DC73040	Rock	(0.07)		(0.03)	(0.7)		1.56	1.67	2.56						

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag**	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73041	Stream sediment	40	1.7	(3)	704	2.3	0.11	(0.8)	0.029	32	24	2.7	(3.7)	1.7	
NCS DC73043	Stream sediment	66	32.2	55.4	460	2.6	0.42	(1.3)	0.22	80	26	12.9	66	16.0	
NCS DC73045	Stream sediment	856	48.4	65.5	0.135	1.4	0.26		(32)	50	99	9.0	43.3	7.6	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73041	Stream sediment	2.8	1.2	0.67	0.68	172	16.3	1.70	0.94	2.75	4.7	0.24	(0.21)	0.020	
NCS DC73043	Stream sediment	21	4.8	2.57	1.17	632	18.8	5.43	1.42	5.30	18.3	0.90	0.48	0.063	
NCS DC73045	Stream sediment	23.8	3.1	1.76	0.88	438	10.8 [▲] 10.4-14.3	3.43	1.31	5.98	111	0.61	0.34	0.036	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73041	Stream sediment	17.0	8.4	0.12	322	0.42	(130)	6.2	13.3	2.3	332	20.5	3.68	75.3	
NCS DC73043	Stream sediment	40.4	38.0	0.35	519	0.55	689	14.6	33.5	36.5	498	35.0	9.24	154	
NCS DC73045	Stream sediment	25.3	47.2	0.28	691	2.75	420	9.7	21.5	21.8	356	0.269	5.86	79.0	
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73041	Stream sediment	(61)	0.13	1.99	0.038	2.14	1.21	413	0.48	0.25	(0.016)	6.30	0.128	0.47	
NCS DC73043	Stream sediment	122	2.52	12.7	0.146	6.25	3.46	78.0	1.18	0.86	0.040	16.6	0.368	0.90	
NCS DC73045	Stream sediment	0.552	1.22	6.87		3.92	2.01	0.343	0.78	0.56	0.032	8.39	0.265	6.18	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *	Al ₂ O ₃ *	TFe ₂ O ₃	FeO*	MgO*	
NCS DC73041	Stream sediment	0.11	1.11	19.8 [▲] 16.8-20.6	0.28	8.14	0.69	25.0	87.6	72.20	14.86	1.46	0.27	0.22	
NCS DC73043	Stream sediment	0.37	1.71	88.9	2.18	26.6	2.49	101	180	63.48	14.10	5.16	2.35	1.73	
NCS DC73045	Stream sediment	0.28	2.09	62.3	1.19	16.8 [▲] 16.1-19.5	1.80	0.260	223	69.66	8.84	3.52	0.82	1.25	
		Chemical Composition(μg/g)													
		CaO*	Na ₂ O*	K ₂ O*	H ₂ O**	CO ₂ *	Corg*	TC*	LOI*						
NCS DC73041	Stream sediment	1.35	4.99	3.22	0.80		(0.09)	(0.12)	(0.98)						
NCS DC73043	Stream sediment	3.78	0.83	3.04	3.48	3.02	0.57	1.33	6.84						
NCS DC73045	Stream sediment	5.07	0.58	1.85	(2.7)	(3.9)	0.46	1.30	7.16						

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Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag**	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73046	Stream sediment	83	3.5	8.2	311	1.8	0.06		(0.2)	98	32	57.9	0.109	1.3	
NCS DC73047	Stream sediment	90	14.8	61.9	337	2.0	0.41	6.3	4.3	79	36	19.6	144	7.2	
NCS DC73048	Stream sediment	67	24.9	74.5	318	1.6	0.30	1.6	0.23	59	41	11.3	43.1	5.7	
NCS DC73049	Stream sediment	89	33.9	80.1	456	6.4	3.98	6.4	0.38	85	56	12.8	70.0	21.4	
		Chemical Composition(µg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73046	Stream sediment	186	6.6	3.25	2.77	558	20.6	7.99	1.38	6.69	12.2	1.21	0.31	0.086	
NCS DC73047	Stream sediment	39.9	4.6	2.64	1.00	856	15.0	4.59	1.34	7.09	148	0.91	4.31	0.060	
NCS DC73048	Stream sediment	14.6	3.7	2.14	0.85	581	10.7	3.92	1.17	7.35	86.2	0.72	1.36	0.039	
NCS DC73049	Stream sediment	25.7	8.6	4.74	0.84	663	17.4	7.69	1.42	10.5	266	1.58	3.95	0.093	
		Chemical Composition(µg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73046	Stream sediment	49.8	14.7	0.40	0.141	0.67	229 [▲] 222-283	35.3	47.8	349	0.118	(12)	12.2	30.0	
NCS DC73047	Stream sediment	34.2	41.2	0.42	0.111	10.0	0.247	17.2	28.3	60.4	620	29.0	7.70	84.0	
NCS DC73048	Stream sediment	29.5	19.9	0.34	486	0.68	318	12.1	24.5	19.2	224	24.7	6.69	82.2	
NCS DC73049	Stream sediment	40.0	92.9	0.86	638	4.88	0.136	18.4	38.5	28.1	410	35.7	10.3	204	
		Chemical Composition(µg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73046	Stream sediment	(69)	0.22	29.5	0.089	8.97	2.42	363	2.40	1.23	(0.03)	4.96	1.71	~0.15	
NCS DC73047	Stream sediment	363	1.90	11.1	8.75	5.17	3.08	84.3	1.25	0.76	0.059	12.0	0.452	0.87	
NCS DC73048	Stream sediment	84	2.27	7.10	0.159	4.45	2.41	17.9	0.96	0.65	0.030	9.81	0.308	0.52	
NCS DC73049	Stream sediment	207	1.18	11.4	0.652	8.65	9.39	19.3	4.55	1.35	0.046	25.9	0.313	1.33	
		Chemical Composition(µg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *	Al ₂ O ₃ *	TFe ₂ O ₃	MgO*	CaO*	
NCS DC73046	Stream sediment	0.45	1.24	332	(0.5)	27.9	2.66	115	252	47.27	10.84	12.91	8.82	7.42	
NCS DC73047	Stream sediment	0.42	5.91	302	1.92	26.4	2.72	94.2	264	70.49	10.83	4.64	1.03	1.14	
NCS DC73048	Stream sediment	0.35	2.34	60.1	2.15	21.8	2.23	51.7	275	82.85	7.90	3.05	0.67	(0.13)	
NCS DC73049	Stream sediment	0.87	8.79	91.8	18.9	48.3	5.80	85.2	346	73.54	11.40	4.08	0.96	0.21	
		Chemical Composition(µg/g)													
		Na ₂ O*	K ₂ O*	FeO*	H ₂ O+*	CO ₂ *	Corg*	TC*	LOI*						
NCS DC73046	Stream sediment	1.62 [▲] 1.38-1.66	1.12	2.20	(5.6)		0.30	0.34	5.87						
NCS DC73047	Stream sediment	0.37	1.49	1.57	4.53	(0.3)	2.21	2.41	8.52						
NCS DC73048	Stream sediment	(0.08)	2.07	(0.33)	2.15		(0.17)	(0.21)	2.34						
NCS DC73049	Stream sediment	0.36	2.27	1.65	3.90		1.39	1.45	6.26						

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73054	Floodplain sediments	0.074	12.7	55	574	2.4	0.34	2.6	0.066	82	34	16.9	79	8.9	
NCS DC73055	Floodplain sediments	0.067	13.7	50	511	2.1	0.34	2.3	0.14	70	284	13.0	68	7.9	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Ho	I	In	
NCS DC73054	Floodplain sediments	26	5.4	3.1	1.4	548	18.9	6.0	1.49	7.4	0.026	1.10	3.8	0.063	
NCS DC73055	Floodplain sediments	25	5.0	2.8	1.3	610	16.3	5.3	1.31	6.4	0.019	1.00	1.02	0.058	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73054	Floodplain sediments	40	40	0.48	841	0.39	418	16.7	36	37	287	26	9.2	108	
NCS DC73055	Floodplain sediments	38	39	0.44	664	0.72	464	14.0	33	32	657	22	8.4	100	
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73054	Floodplain sediments	77	1.08	13.3	0.11▲ 0.10-0.11	6.8	3.6	115	1.2	0.98	0.046	13.6	0.463	0.68	
NCS DC73055	Floodplain sediments	268	1.14	12.5	0.19	6.2	2.9	201	1.0	0.89	(0.043)	12.5	0.374	0.68	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *	Al ₂ O ₃ *	TFe ₂ O ₃	FeO*	MgO*	
NCS DC73054	Floodplain sediments	0.49	2.3	97	2.0	29	3.2	64	270	67.33	14.49	5.52	(0.36)	1.34	
NCS DC73055	Floodplain sediments	0.45	2.4	83	1.8	26	2.9	69	220	59.68▲ 59.61-59.77	12.62	4.73	1.20	2.24	
		Chemical Composition(μg/g)													
		CaO*	Na ₂ O*	K ₂ O*	H ₂ O**	CO ₂	Corg*	TC*	LOI*						
NCS DC73054	Floodplain sediments	1.09	1.26	2.07	(5.2)		(0.3)	0.31	(5.6)						
NCS DC73055	Floodplain sediments	6.91	1.62	2.40	3.73	4.77	(0.4)	1.72	8.65						
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂	(Fe ₂ O ₃)	F			
NCS DC 73304	Rock	90.36	3.52	(0.62)	0.082	0.30	0.061	0.65	(0.99)	(0.18)	3.22	0.0183	70		
NCS DC 73305	Rock	59.23	18.82	(1.38)	2.01	0.60	0.35	4.16	(5.6)	(0.077)	7.60	0.129	70		
		org·C	LOI	P	Ti										
NCS DC 73304	Rock	(0.04)	(1.10)	0.0970	0.158										
NCS DC 73305	Rock	(0.15)	(5.95)	0.0690	0.395										
Number	Name	Chemical Composition(μg/g)													
		Ta	Te	Th	Ti	U	Ag	As	W	B	Ba	Cu	Zr	Ga	Ge
NCS DC 73304	Rock	(0.42)	0.038	7.0	(0.36)	2.1	0.062	9.1	1.16	34	143	19.0	214	5.3	1.16
NCS DC 73305	Rock	(1.0)	(0.022)	12.8	0.71	1.5	0.047	1.4	0.79	154	450	42	96	25.6	3.1
		Hg	Li	Pb	Sc	Sr	Zn	Mn	Cd	Sb	Ce	Dy	Eu	V	Gd
NCS DC 73304	Rock	(8.4)*	11.1	7.6	4.2	58	20	155	0.060	0.60	48	4.1	1.02	33.4	4.5
NCS DC 73305	Rock	9.7*	44	8.7	18.5	90	55	173	(0.003)	0.17	109	5.1	1.7	87	6.7
		Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Be	Bi	CO
NCS DC 73304	Rock	0.75	21	0.30	21	1.1	0.79	0.32	1.92	2.0	5.4	21.5	0.97	(0.18)	6.4
NCS DC 73305	Rock	0.98	62	0.41	48	2.0	1.02	0.43	2.6	2.7	13.6	26	3.0	0.23	21
		Cr	Cs	Hf	In	Mo	Nb	Ni	Rb	Se	Cl				
NCS DC 73304	Rock	20	1.8	6.6	(0.026)	0.76	5.9	16.6	29	(0.098)	(42)				
NCS DC 73305	Rock	99	14	2.9	(0.082)	0.35	14.3	36.8	205	(0.084)	(40)				

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Number	Name	Chemical Composition(µg/g)										Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	
NCS DC 73319a	Soil	0.81±0.04	33±3	69±4	700±40	3.3±0.3	1.4±0.2	4.1±0.6	2.5±0.2	71±5	-87	70
NCS DC 73320a	Soil	0.072±0.010	18±1	27±4	1187±38	2.6±0.2	0.29±0.05	4.6±0.6	0.20±0.02	123±6	-51	70
NCS DC 73321a	Soil	0.075±0.009	6.2±0.5	21±2	1117±32	1.7±0.1	0.21±0.04	3.8±0.4	0.079±0.012	45±4	-73	70
NCS DC 73322a	Soil	0.059±0.007	9.6±0.6	88±9	312±15	2.4±0.2	1.8±0.2	2.8±0.4	0.11±0.02	99±7	-30	70
NCS DC 73323a	Soil	4.6±0.3	242±16	108±8	343±15	1.8±0.2	23±2	-1.5	0.16±0.03	85±5	-31	70
NCS DC 73324a	Soil	0.24±0.04	88±5	28±4	181±21	6.9±0.4	89±5	-1.1	-0.5	85±11	110±14	70
NCS DC 73325a	Soil	0.080±0.012	-4.2	-19	237±24	2.9±0.3	-0.37	6.4±0.8	-0.23	113±13	-54	70
NCS DC 73326a	Soil	0.067±0.006	13.2±1.4	51±5	492±17	2.0±0.2	0.31±0.04	3.7±0.4	0.14±0.02	68±5	68±6	70
		Chemical Composition(µg/g)										
		Co	Cr	Cs	Cu	Dy	Er	Eu	F	Ga	Gd	
NCS DC 73319a	Soil	10.3±0.6	44±3	7.2±0.5	42±5	6.0±0.5	3.8±0.4	0.89±0.08	513±21	18.1±1.4	5.5±0.4	
NCS DC 73320a	Soil	11.1±0.5	52±4	4.7±0.3	20±2	4.5±0.4	2.5±0.4	1.8±0.2	723±39	14.8±0.9	6.2±0.4	
NCS DC 73321a	Soil	6.9±0.6	35±3	3.2±0.2	13.4±1.1	2.8±0.3	1.7±0.2	0.8±0.2	354±31	15.7±0.8	3.1±0.3	
NCS DC 73322a	Soil	20±1	81±4	12.5±0.9	43±2	4.4±0.4	2.5±0.3	1.2±0.2	1127±72	23±1	5.5±0.3	
NCS DC 73323a	Soil	18±2	113±7	18±2	147±10	5.1±0.4	3.2±0.3	1.0±0.24	601±25	25±1	4.5±0.6	
NCS DC 73324a	Soil	20±2	86±8	9.4±0.8	358±18	5.4±0.5	3.7±0.5	0.39±0.07	1526±82	40±4	4.2±0.5	
NCS DC 73325a	Soil	93±4	379±24	2.9±0.6	84±7	5.7±0.5	2.4±0.3	3.0±0.5	341±39	39±2	8.3±0.6	
NCS DC 73326a	Soil	12.3±1.0	65±4	7.3±0.5	24±2	4.9±0.4	2.7±0.3	1.2±0.2	555±26	15.1±0.7	5.5±0.5	
		Chemical Composition(µg/g)										
		Ge	Hf	Hg	Ho	I	In	La	Li	Lu	Mn*	
NCS DC 73319a	Soil	1.3±0.2	6.5±0.5	0.31±0.03	1.3±0.2	2.0±0.2	0.12±0.02	39±2	28±2	0.57±0.06	0.131±0.006	
NCS DC 73320a	Soil	1.2±0.1	6.3±0.5	0.017±0.004	0.9±0.1	2.6±0.3	0.048±0.005	61±3	22±1	0.38±0.04	0.092±0.003	
NCS DC 73321a	Soil	1.2±0.1	7.1±0.7	0.116±0.005	0.58±0.06	2.5±0.3	0.033±0.004	21±3	18±1	0.28±0.04	0.033±0.001	
NCS DC 73322a	Soil	1.7±0.2	6.9±0.7	0.072±0.006	0.85±0.08	4.0±0.3	0.095±0.006	54±4	27±2	0.40±0.07	0.030±0.001	
NCS DC 73323a	Soil	2.3±0.3	8.3±1.0	0.7±0.1	1.1±0.2	2.8±0.3	1.4±0.2	35±3	51±3	0.49±0.04	0.051±0.002	
NCS DC 73324a	Soil	6.2±0.5	6.5±1.0	0.086±0.008	1.1±0.2	13.2±2.7	4.1±0.9	31±2	43±2	0.80±0.11	0.23±0.01	
NCS DC 73325a	Soil	1.5±0.2	8.9±1.1	0.058±0.008	1.0±0.2	19.0±2.2	0.11±0.01	56±6	23±2	0.30±0.04	0.19±0.01	
NCS DC 73326a	Soil	1.3±0.1	6.9±0.8	0.027±0.005	0.98±0.12	1.6±0.2	0.053±0.005	35±3	33±2	0.42±0.04	0.063±0.002	
		Chemical Composition(µg/g)										
		Mo	N*	Nb	Nd	Ni	P	Pb	Pr	Rb	S	
NCS DC 73319a	Soil	2.0±0.2	0.32±0.03	15.3±1.4	30.8±1.3	16.9±1.5	0.23±0.02*	339±12	8.5±0.7	137±9	726±94	
NCS DC 73320a	Soil	1.6±0.1	0.075±0.006	35±4	55±3	24±2	512±30	27±2	14.8±1.2	95±4	316±23	
NCS DC 73321a	Soil	0.5±0.1	0.085±0.004	10.6±1.0	19±2	15±1	0.042±0.002*	28±2	4.9±0.4	85±6	-146	
NCS DC 73322a	Soil	0.70±0.06	0.073±0.004	16.1±1.2	40±3	36±2	0.031±0.003*	37±3	11.2±0.9	152±5	130±19	
NCS DC 73323a	Soil	2.3±0.2	0.059±0.005	20±2	27±3	38±2	353±40	245±14	7.3±0.6	142±6	839±37	
NCS DC 73324a	Soil	169±10	0.021±0.003	38±3	20±2	75±6	0.024±0.004*	478±16	5.6±0.7	118±13	534±73	
NCS DC 73325a	Soil	3.2±0.3	0.13±0.02	80±4	47±5	217±8	0.21±0.02*	18.3±2.1	11.7±1.7	28±3	432±45	
NCS DC 73326a	Soil	0.76±0.06	0.06±0.004	13.1±1.2	31±2	30±2	0.068±0.003*	21±2	8.0±0.6	96±5	187±21	
		Chemical Composition(µg/g)										
		Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	
NCS DC 73319a	Soil	2.4±0.3	8.3±0.3	-0.22	5.9±0.4	9.8±1.1	192±9	1.3±0.1	0.98±0.09	-0.06	13.1±0.9	
NCS DC 73320a	Soil	0.86±0.08	9.5±0.5	0.26±0.03	7.9±0.4	2.0±0.2	248±6	-0.86	0.89±0.07	-0.037	13.3±0.9	
NCS DC 73321a	Soil	0.69±0.06	5.6±0.4	0.12±0.03	3.5±0.2	2.6±0.2	325±12	1.2±0.2	0.50±0.04	-0.04	6.7±0.8	
NCS DC 73322a	Soil	1.4±0.2	15.9±0.6	0.31±0.04	6.8±0.5	5.6±0.6	58±2	1.4±0.2	0.84±0.07	-0.085	19±2	
NCS DC 73323a	Soil	14.9±1.3	16.9±1.2	0.75±0.12	4.5±0.3	7.2±0.8	39±3	1.6±0.3	0.80±0.07	6.6±1.3	17.2±1.7	
NCS DC 73324a	Soil	14±2	17±2	0.47±0.08	4.7±0.4	439±58	30±4	16±3	0.84±0.09	-0.5	35±6	
NCS DC 73325a	Soil	0.53±0.07	25±2	0.34±0.07	9.3±1.1	5.0±0.4	37±5	5.7±0.9	1.2±0.2	-0.06	10.5±1.4	
NCS DC 73326a	Soil	1.2±0.2	11.5±0.6	0.098±0.022	6.0±0.5	2.9±0.2	197±6	1.1±0.1	0.86±0.10	-0.034	12.2±0.9	

Data with * is in percent.

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		Chemical Composition(μg/g)													
		Ti*	Tl	Tm	U	V	W	Y	Yb	Zn	Zr				
NCS DC 73319a	Soil	0.326±0.009	1.2±0.1	0.61±0.06	6.0±0.3	61±4	3.5±0.5	38±3	3.8±0.4	475±30	218±10				
NCS DC 73320a	Soil	0.28±0.02	0.63±0.06	0.38±0.03	1.9±0.2	65±5	1.9±0.3	25±2	2.5±0.3	58±3	219±13				
NCS DC 73321a	Soil	0.228±0.010	0.51±0.05	0.28±0.03	1.2±0.2	45±3	1.1±0.2	16±2	1.8±0.3	39±3	247±15				
NCS DC 73322a	Soil	0.46±0.02	1.0±0.1	0.4±0.1	3.0±0.3	125±6	2.9±0.3	23±2	2.6±0.3	92±3	234±5				
NCS DC 73323a	Soil	0.61±0.03	1.1±0.1	0.50±0.05	4.0±0.4	136±7	7.4±0.6	29±2	3.2±0.3	172±7	272±9				
NCS DC 73324a	Soil	0.434±0.019	3.6±0.4	0.70±0.09	28±2	108±5	132±13	33±4	5.2±0.6	1529±79	156±5				
NCS DC 73325a	Soil	2.06±0.10	0.30±0.04	0.33±0.06	2.6±0.2	240±11	2.3±0.4	25±3	2.0±0.3	187±13	370±20				
NCS DC 73326a	Soil	0.37±0.02	0.57±0.05	0.43±0.04	2.3±0.3	80±3	1.8±0.2	26±1	2.8±0.3	66±3	241±6				
		Chemical Composition(%)													
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	FeO	CaO	MgO	Na ₂ O	K ₂ O	H ₂ O+	C.org.				
NCS DC 73319a	Soil	56.60±0.46	12.92±0.21	4.41±0.20	-2.25	2.78±0.11	1.17±0.04	1.65±0.07	2.85±0.08	-4.3	-6.8				
NCS DC 73320a	Soil	65.97±0.55	11.70±0.17	4.22±0.14	-0.78	4.00±0.14	1.40±0.03	2.67±0.06	3.03±0.08	2.85±0.22	0.71±0.05				
NCS DC 73321a	Soil	72.97±0.40	12.97±0.14	2.63±0.10	-0.55	0.84±0.03	0.61±0.02	2.54±0.07	2.91±0.06	2.66±0.17	0.65±0.06				
NCS DC 73322a	Soil	63.33±0.47	16.93±0.18	6.92±0.15	-0.43	-0.13	1.33±0.04	-0.1	3.00±0.07	6.39±0.36	0.42±0.04				
NCS DC 73323a	Soil	61.52±0.39	16.88±0.15	9.8±0.21	-0.19	-0.07	0.70±0.02	-0.1	2.14±0.06	7.02±0.37	-0.2				
NCS DC 73324a	Soil	45.35±0.33	26.63±0.14	12.39±0.17	-0.1	0.13±0.02	0.20±0.02	-0.14	0.44±0.02	12.9±0.48	-0.2				
NCS DC 73325a	Soil	33.73±0.35	27.39±0.50	18.03±0.15	-1.46	-0.2	0.31±0.02	-0.1	0.35±0.02	13.61±0.63	1.18±0.08				
NCS DC 73326a	Soil	60.12±0.30	11.81±0.17	4.37±0.14	1.23±0.09	7.59±0.14	2.00±0.04	1.71±0.06	2.30±0.05	3.47±0.13	0.50±0.05				
		Chemical Composition(%)													
		CO ₂	TC	L.O.I.											
NCS DC 73319a	Soil		7.87±0.26	15.82±0.64											
NCS DC 73320a	Soil	2.41±0.20	1.37±0.03	5.87±0.34											
NCS DC 73321a	Soil		0.69±0.05	3.72±0.27											
NCS DC 73322a	Soil		0.46±0.03	-6.97											
NCS DC 73323a	Soil		-0.2	7.22±0.25											
NCS DC 73324a	Soil		0.23±0.02	-13.22											
NCS DC 73325a	Soil		1.30±0.06	15.36±0.92											
NCS DC 73326a	Soil	5.34±0.21	1.91±0.07	8.98±0.32											
Data with * is in percent.															
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce	Zr	
NCS DC 73327	Synthetic Silicate	(0.034)	2.0	2.1	24	2.0	15	2.5	5.0	3.0	0.022	0.28		2.2	70
NCS DC 73328	Synthetic Silicate	0.064	5.0	5.1	54	5.0	18	5.5	8.0	6.0	0.052	0.58	2.0	5.2	70
NCS DC 73329	Synthetic Silicate	0.11	10	10.0	104	10.0	23	10.5	13	11.0	0.10	1.1	5.0	10.2	70
NCS DC 73330	Synthetic Silicate	0.21	20	20	204	20.0	33	20.5	23	21	0.20	2.1	10.0	20	70
NCS DC 73331	Synthetic Silicate	0.51	50	50	504	50	63	50	53	51	0.50	5.1	20	50	70
		La	Yb	Y	Co	Cr	Mo	Nb	Ni	Bi	Sn	V	W	Be	
NCS DC 73327	Synthetic Silicate	2.1	0.2	2.0	2.6	2.3	0.21	2.3	2.6	0.31	0.28	2.8	0.20	0.26	
NCS DC 73328	Synthetic Silicate	5.1	0.50	5.0	5.6	5.3	0.51	5.3	5.6	0.61	0.58	5.8	0.50	0.56	
NCS DC 73329	Synthetic Silicate	10	1.0	10	10.6	10.3	1.0	10.3	10.6	1.1	1.1	10.8	1.0	1.1	
NCS DC 73330	Synthetic Silicate	20	2.0	20	20.6	20.3	2.0	20.3	20.6	2.1	2.1	20.8	2.0	2.1	
NCS DC 73331	Synthetic Silicate	50	5.0	50	50.6	50	5.0	50	50.6	5.1	5.1	51	5.0	5.1	
		Mn	Ti												
NCS DC 73327	Synthetic Silicate	27	24												
NCS DC 73328	Synthetic Silicate	57	54												
NCS DC 73329	Synthetic Silicate	107	104												
NCS DC 73330	Synthetic Silicate	207	204												
NCS DC 73331	Synthetic Silicate	507	504												

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Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce	Zr	
NCS DC73332	Synthetic Silicate	1.0	100	100	1000	100	113	100	103	101	1.0	10	100	100	70
NCS DC73334	Synthetic Silicate	5.0	500	500	0.500*	500	513	500	500	500	5.0	50	500	500	70
NCS DC73335	Synthetic Silicate	10		1000	1.000*	1000	1010	1000	1000	1000	10	100	1000	1000	70
NCS DC73336	Synthetic Silicate	20				2000		2000	2000	2000	20	200			70
NCS DC73337	Synthetic Silicate	50				0.500*		0.500*	0.500*	0.500*	50	500			70
		La	Yb	Y	Bi	Sn	Be	Mo	W	Nb	Co	Ni	Cr	V	
NCS DC73332	Synthetic Silicate	100	10	100	10	10	10	10	10	100	101	101	100	101	
NCS DC73334	Synthetic Silicate	500	50	500	50	50	50	50	50	500	500	500	500	500	
NCS DC73335	Synthetic Silicate		100		100	100	100	100	100				1000	1000	
		Mn	Ti												
NCS DC73332	Synthetic Silicate	1000	1000												
NCS DC73334	Synthetic Silicate	0.500*	0.500*												
NCS DC73335	Synthetic Silicate	1.000*	1.000*												
NCS DC73336	Synthetic Silicate		2.000*												
* Chemical Composition:Percent															
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag	As	B	Ba	Cu	Ga	Li	Pb	Sr	Zn	Cd	Sb	Ce	
NCS DC73338	Synthetic Limestone	(0.03)	2.2	2.2	24	2.2	2.8	3.2	2.4	170	3.0	(0.023)	0.21	2.8	70
NCS DC73339	Synthetic Limestone	0.060	5.2	5.2	54	5.2	5.8	6.2	5.4	200	6.0	0.053	0.51	5.8	70
NCS DC73340	Synthetic Limestone	0.11	10.2	10	104	10.2	10.8	11.2	10.4	250	11	0.1	1.0	11	70
NCS DC73341	Synthetic Limestone	0.21	20	20	204	20	20.8	21	20.4	350	21	0.2	2.0	21	70
NCS DC73343	Synthetic Limestone	1.0	100	100	1000	100	101	101	100	1150	101	1	10	101	70
NCS DC73344	Synthetic Limestone	2.0	200	200	0.200*	200	200	200	200	0.215*	200	2	20	200	70
NCS DC73345	Synthetic Limestone	5.0	500	500	0.500*	500		500	500	0.515*	500	5	50	500	70
NCS DC73346	Synthetic Limestone	10				1000			1000		1000	10	100		70
		Zr	Ti	Mn											
NCS DC73338	Synthetic Limestone	4.0	31	37											
NCS DC73339	Synthetic Limestone	7.0	61	67											
NCS DC73340	Synthetic Limestone	12	111	117											
NCS DC73341	Synthetic Limestone	22	210	217											
NCS DC73343	Synthetic Limestone	102	1010	1020											
NCS DC73344	Synthetic Limestone	202	2010	2020											
NCS DC73345	Synthetic Limestone	500	0.500*	0.500*											
NCS DC73346	Synthetic Limestone			1.000*											
* Chemical Composition:Percent															

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Number	Name	Chemical Composition										Unit Size (in g)			
		Ag(10 ⁻⁹)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁶)	Ba(10 ⁻⁶)	Be(10 ⁻⁹)	Bi(10 ⁻⁹)	Br(10 ⁻⁶)	Ca(10 ⁻²)	Cd(10 ⁻⁹)				
NCS DC 73347a	Human hair	(50)	(2)	(0.28)	2.9	11.4	110	21	(1.1)	0.145	0.07	6			
NCS DC 73347a	Human hair	Ce(10 ⁻⁶)	Cl(10 ⁻²)	Co(10 ⁻⁶)	Cr(10 ⁻⁶)	Cs(10 ⁻⁶)	Cu(10 ⁻⁶)	Dy(10 ⁻⁹)	Er(10 ⁻⁹)	Eu(10 ⁻⁹)	F(10 ⁻⁶)	Fe(10 ⁻⁶)			
		(0.35)	(0.018)	0.045	0.41	(0.003)	14.3	20	14	3.7	(11)	36			
NCS DC 73347a	Human hair	Gd(10 ⁻⁹)	Ge(10 ⁻⁹)	Hf(10 ⁻⁶)	Hg(10 ⁻⁹)	Ho(10 ⁻⁹)	I(10 ⁻⁶)	K(10 ⁻²)	La(10 ⁻⁶)	Li(10 ⁻⁶)	Lu(10 ⁻⁹)	Mg(10 ⁻²)			
		20		(0.6)	670	4.6	0.8	(0.002)	0.16	(1.6)	(2.8)	(0.014)			
NCS DC 73347a	Human hair	Mn(10 ⁻⁶)	Mo(10 ⁻⁶)	N(10 ⁻²)	Na(10 ⁻²)	Nd(10 ⁻⁶)	Ni(10 ⁻⁶)	P(10 ⁻²)	Pb(10 ⁻⁶)	Pr(10 ⁻⁹)	Rb(10 ⁻⁶)	S(10 ⁻²)			
		2	0.17	13.9	0.0089	0.093	0.43	0.014	5.7	25	(0.06)	4.19			
NCS DC 73347a	Human hair	Sb(10 ⁻⁶)	Sc(10 ⁻⁶)	Se(10 ⁻⁶)	Si(10 ⁻²)	Sm(10 ⁻⁹)	Sn(10 ⁻⁶)	Sr(10 ⁻⁶)	Tb(10 ⁻⁹)	Th(10 ⁻⁶)	Tl(10 ⁻⁶)	Ti(10 ⁻⁹)			
		(0.065)	(0.018)	0.58	(0.06)	19	(0.2)	7.7	3.3	0.064	(3.3)	7.7			
NCS DC 73347a	Human hair	Tm(10 ⁻⁹)	U(10 ⁻⁹)	V(10 ⁻⁶)	Y(10 ⁻⁶)	Yb(10 ⁻⁹)	Zn(10 ⁻⁶)	Ash(%)							
		21	99	0.5	11.2	15	137	(5.5)							
Number	Name	Chemical Composition(μg/kg)										Unit Size (in g)			
		Pt	Pd	Ir	Os	Au	Rh								
NCS DC 73352	Platinum Group	0.26	0.26	(0.04)	(0.05)	0.90							500		
NCS DC 73353	Platinum Group	1.6	2.3	(0.05)	(0.05)	10							500		
NCS DC 73354	Platinum Group	6.4	4.6	4.3	9.6	1.1	1.3						500		
NCS DC 73355	Platinum Group	58	60	4.7	2.4	4.3	4.3						500		
NCS DC 73356	Platinum Group	20	11.3	136	353		10						500		
NCS DC 73357	Platinum Group	440	568	28	15.6	(45)	22						500		
NCS DC 73358	Platinum Group	14.7	15.2	1.2	0.64	(1.8)	1.1						500		
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂	LOI			
NCS DC 73375	Limestone	6.65	0.68	0.21	(0.06)	0.71	51.1	(0.03)	0.15	(0.4)	39.8	40.2	70		
NCS DC 73376	Gramite	66.3	16.3	3.12	1.6	1.63	2.66	5.3	2.60	(1.0)	0.35	1.28	70		
NCS DC 73377	Plagioclase Bomblende	49.6	13.8	14.8	10.8	7.2	9.6	2.07	0.48	(1.7)	(0.16)	1.06	70		
		Chemical Composition(μg/g)													
		Ag	As	B	Ba	Be	Bi	Cd	Ce	Cl	Co	Cr	Cs	Cu	Dy
NCS DC 73375	Limestone	(0.024)	0.67	(6)	8.6	0.13	0.032	(0.018)	4.6	(30)	(0.7)	(3.3)	(0.12)	(2.2)	0.28
NCS DC 73376	Gramite	0.027	0.25	15	1140	1.7	0.094	(0.06)	48	(127)	7.5	23	2.6	(2.6)	1.5
NCS DC 73377	Plagioclase Bomblende	(0.05)	25	12	62	0.34	(0.06)	0.14	7.8	(120)	52	137	1.9	84	3.5
		Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Hc	In	La	Li	Lu	Mn
NCS DC 73375	Limestone	0.15	0.082	240	(0.8)	0.36	0.13	0.21	0.005	(0.04)	(0.03)	2.3	4.5	0.023	30
NCS DC 73376	Gramite	0.76	0.10	660	18	2.4	0.93	3.3	0.004	0.27		25	24	0.11	430
NCS DC 73377	Plagioclase Bomblende	2.3	0.92	206	17.3	2.7	1.46	1.5	0.0032	0.84		2.9	11	0.38	1600
		Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc	Se	Sm	Sn
NCS DC 73375	Limestone	0.18	(0.8)	1.95	(4)	57	(5)	0.60	4.0	35	0.068	(0.7)	0.021	0.40	(0.5)
NCS DC 73376	Gramite	(0.3)	4	21	12.2	570	7.7	5.7	57	(50)	0.063	5.0	0.019	3.3	0.8
NCS DC 73377	Plagioclase Bomblende	0.16	2.7	6.4	119	375	(9)	1.25	30	(70)	(0.7)	43	0.083	2.1	(0.8)
		Sr	Ta	Tb	Th	Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
NCS DC 73375	Limestone	110	(0.05)	0.054	0.86	233	(0.033)	0.022	0.23	5.2	0.13	(1.8)	0.15	(7)	(11)
NCS DC 73376	Gramite	690	(0.33)	0.29	1.9	1780	(0.20)	0.11	(0.4)	45	0.42	7.4	0.69	46	(90)
NCS DC 73377	Plagioclase Bomblende	142	(0.14)	0.57	(0.34)	5530	(0.11)	0.36	(0.14)	300	0.34	20	2.4	100	57

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Number	Name	Chemical Composition										Unit Size (in g)			
		Pt(10 ⁻³)	Pt(10 ⁻⁶)	Pd(10 ⁻³)	Pd(10 ⁻⁶)	Os(10 ⁻³)	Ru(10 ⁻³)	Ir(10 ⁻³)	Rh(10 ⁻³)	Au(10 ⁻³)					
NCS DC 73397	Platinum group	0.66		0.66		0.25	0.66	0.16	0.066	2.3				1000	
NCS DC 73398	Platinum group		1.9		0.57	43	74	28	7.3					1000	
NCS DC 73399	Platinum group		5.7		1.67	2	2	2.1	1.5					1000	
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		Cu	Pb	Zn	Fe	S	Mn	SiO ₂	Al ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O		Ag*
NCS DC 73510	Ore	0.096	5.13	13.9	19.6	29.0	0.066	14.1	(2.5)	0.59	6.5	(0.03)	0.78	148	50
		Ca*	Od*												
NCS DC 73510	Ore	62	400												
*Chemical Composition(10 ⁻⁶)															
Number	Name	Chemical Composition(mg/g)											Unit Size (in g)		
		Ni(%)	Co	S(%)	Ag	As	Cd	Cr	Cu	Mn	P	Pb			
NCS DC 73514	Nickel Ore	0.11	49	0.74	0.56	5.3	0.28	790	330	960	728	21	50		
NCS DC 73515	Nickel Ore	0.33	104	1.53	0.75	5.1	0.34	0.13*	681	0.11*	485	25	50		
NCS DC 73516	Nickel Ore	1.02	262	3.78	1.1	5.4	0.44	0.12*	0.16*	0.11*	829	25	50		
NCS DC 73517	Nickel Ore	5.93	0.13*	18.14	9.3	25	2.5	(720)	1.52*	614	266	77	50		
NCS DC 73518	Nickel Ore	9.01	0.20*	27.83	15.2	37	4	(457)	2.47*	295	(130)	116	50		
		Sc	Ti	V	Zn	SiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	Mgo(%)	CaO(%)	Na ₂ O(%)	K ₂ O(%)	H ₂ O(%)		
NCS DC 73514	Nickel Ore	15.6	0.42*	102	79	54.89	12.21	8.58	9.67	4.6	2.16	1.51	3.37		
NCS DC 73515	Nickel Ore	15.8	0.32*	93	77	52.29	9.09	10.71	14.56	4.02	1.59	1	3.78		
NCS DC 73516	Nickel Ore	17.6	0.41*	112	77	46.85	8.65	14.69	14.45	4.7	1.55	0.9	3.21		
NCS DC 73517	Nickel Ore	9.1	0.14*	61	102	27.4	4.06	34.71	9.88	2.55	0.69	0.34	2.4		
NCS DC 73518	Nickel Ore	2.5	422	(30)	134	14.13	1.04	48.37	6.3	1.16	0.22	0.06	1.65		
Note: Date in () is for reference only. value with* means in percent															
Number	Name	Chemical Composition											Unit Size (in g)		
		Mo(%)	S(%)	Ag(μg/g)	As(μg/g)	Bi(μg/g)	Cd(μg/g)	Co(μg/g)	Cr(μg/g)	Cu(μg/g)	Ge(μg/g)	Mn(%)			
NCS DC 73519	Molybdenum Ore	0.066	0.38	(0.11)	5.2	6.9	0.50	13.3	23	46	6.2	0.92	50		
NCS DC 73520	Molybdenum Ore	0.15	0.44	0.10	4.8	7.4	0.52	12.9	23	46	6.0	0.91	50		
NCS DC 73521	Molybdenum Ore	0.54	0.68	0.13	4.7	8.2	0.52	13.2	23	48	6.2	0.91	50		
NCS DC 73522	Molybdenum Ore	50.08	33.72	(2.1)	(2.2)	86	0.20	10.2	30	266	(0.67)	0.15	50		
		Ni(μg/g)	P(μg/g)	Pb(μg/g)	Re(μg/g)	Sb(μg/g)	Sn(μg/g)	W(μg/g)	Zn(μg/g)	SiO ₂ (%)	Al ₂ O ₃ (%)	Fe ₂ O ₃ (%)	MgO(%)		
NCS DC 73519	Molybdenum Ore	54	1160	9.1	(0.07)	0.58	4.7	489	357	57.23	5.20	10.05	4.29		
NCS DC 73520	Molybdenum Ore	52	1231	10.5	0.12	0.60	4.5	518	365	57.47	5.20	9.89	4.37		
NCS DC 73521	Molybdenum Ore	52	1210	13.7	0.31	0.73	4.7	557	360	56.87	5.12	9.88	4.35		
NCS DC 73522	Molybdenum Ore	(20)	(130)	316	23	13.2	(11.9)	732	68	7.58	(1.16)	1.23	1.96		
		Total oil and water(%)													
		CaO(%)	Na ₂ O(%)	K ₂ O(%)											
NCS DC 73519	Molybdenum Ore	18.37	0.90	0.66											
NCS DC 73520	Molybdenum Ore	18.13	0.91	0.66											
NCS DC 73521	Molybdenum Ore	18.09	0.90	0.66											
NCS DC 73522	Molybdenum Ore	1.95	(0.21)	(0.06)	0.85										

Section 4 Mineral & Geology(Powder)

Number	Name	Composition(ug/g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73058	Soil	0.088±0.004	12.4±1.0	39±3	639±14	2.7±0.2	0.38±0.04	8.5±0.5	0.098±0.007	70g
NCS DC73059	Soil	0.093±0.003	9.3±0.6	56±3	679±15	2.23±0.07	0.31±0.04	2.4±0.2	0.33±0.02	70g
NCS DC73060	Soil	2.3±0.1	323±14	85±4	255±8	16.3±0.8	301±11	3.3±0.3	2.8±0.2	70g
NCS DC73061	Soil	0.157±0.011	12.9±0.9	131±7	314±11	2.2±0.1	0.63±0.05	7.0±0.5	0.20±0.01	70g
NCS DC73062	Soil	0.086±0.006	13.1±1.0	57±3	502±13	2.06±0.08	0.37±0.04	4.2±0.3	0.31±0.02	70g
NCS DC73063	Soil	0.077±0.005	13.2±0.8	58±3	557±16	2.55±0.10	0.42±0.02	2.3±0.4	0.174±0.008	70g
NCS DC73064	Soil	0.072±0.005	14.2±0.8	61±4	505±13	2.02±0.07	0.36±0.03	4.3±0.3	0.186±0.008	70g
NCS DC73065	Soil	0.060±0.005	11.4±0.7	46±3	564±14	1.68±0.07	0.25±0.03	2.3±0.2	0.121±0.006	70g
NCS DC73066	Soil	0.053±0.004	13.5±1.2	31±2	615±12	1.54±0.06	0.22±0.03	5.2±0.3	0.057±0.006	70g
		Composition(ug/g)								
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	
NCS DC73058	Soil	82±4	53±2	16.0±0.7	69±3	7.9±0.5	23.0±0.8	5.6±0.3	3.2±0.5	
NCS DC73059	Soil	70±4	48±3	15.5±0.9	72±3	6.4±0.4	31±2	5.2±0.3	2.9±0.2	
NCS DC73060	Soil	111±5	44±4	9.5±0.6	62±2	26±2	173±5	7.8±0.4	4.6±0.3	
NCS DC73061	Soil	82±3	85±3	5.9▲ 5.8 ~ 7.5	60±3	7.7±0.4	25.3±1.0	5.2±0.3	2.9±0.3	
NCS DC73062	Soil	74±3	75±3	12.6±0.6	69±4	7.6±0.4	28±2	5.2±0.2	2.9±0.2	
NCS DC73063	Soil	70±3	209±9	11.0±0.6	48±2	8.6±0.4	24±2	5.1±0.4	2.9±0.2	
NCS DC73064	Soil	66±3	113±7	12.6±0.4	67±3	8.1±0.4	25.6±0.9	4.6±0.3	2.6±0.2	
NCS DC73065	Soil	51±2	91±4	12.0±0.5	84±5	5.1±0.3	24.1±0.8	3.6±0.2	2.0±0.2	
NCS DC73066	Soil	41±2	72±4	7.5±0.7	38±2	4.1±0.2	23.7±0.9	2.9±0.2	1.6±0.2	
		Composition(ug/g)								
		Eu	F	Ga	Gd	Ge	Hf	Hg	Ho	I
NCS DC73058	Soil	1.4±0.2	455±14	19.4±0.9	6.2±0.3	1.39±0.06	8.3±0.4	0.034±0.003	1.12±0.14	3.49±0.15
NCS DC73059	Soil	1.4±0.2	603±18	17.4±1.0	5.8±0.3	1.39±0.06	7.3±0.3	0.056±0.005	1.04±0.07	0.97±0.09
NCS DC73060	Soil	1.27±0.06	3069±80	24±3	8.0±0.4	2.3±0.3	7.9±0.4	0.24±0.02	1.55±0.10	3.42±0.17
NCS DC73061	Soil	1.29±0.09	577±20	15.2±0.8	6.0±0.5	1.50±0.06	8.3±0.6	0.075±0.004	1.04±0.12	2.93±0.12
NCS DC73062	Soil	1.27±0.07	690±21	15.4±0.8	5.8±0.3	1.29±0.05	7.4±0.3	0.081±0.007	1.04±0.08	2.30±0.05
NCS DC73063	Soil	1.2±0.2	954±24	17.1±0.9	5.5±0.4	1.15±0.07	5.5±0.4	0.015±0.003	1.03±0.13	1.59±0.08
NCS DC73064	Soil	1.15±0.05	675±24	15.6±0.6	5.2±0.3	1.21±0.06	5.7±0.4	0.035±0.004	0.91±0.05	2.04±0.10
NCS DC73065	Soil	0.98±0.07	530±23	12.8±0.4	3.9±0.2	1.20±0.06	4.0±0.2	0.027±0.003	0.72±0.07	1.33±0.06
NCS DC73066	Soil	0.84±0.04	313±12	11.4±0.5	3.1±0.2	1.19±0.05	5.8±0.4	0.018±0.003	0.58±0.05	2.04±0.09
		Composition(ug/g)								
		In	La	Li	Lu	Mn	Mo	N	Nb	
NCS DC73058	Soil	0.066±0.003	41±3	35.1±1.0	0.50±0.04	923±16	0.68±0.03	1799±41	16.3±0.9	
NCS DC73059	Soil	0.063±0.002	37±2	34.5±0.8	0.43±0.03	674±11	1.11±0.07	874±21	16.9±0.6	
NCS DC73060	Soil	2.3±0.2	55±2	73.6±1.5	0.78±0.04	1675±24	12.2±0.6	1442±27	21.4±1.2	
NCS DC73061	Soil	0.080±0.004	42±2	26.1±0.7	0.44±0.04	119±3	3.2±0.2	1708±51	14.9±0.7	
NCS DC73062	Soil	0.056±0.003	38±2	35.8±1.0	0.45±0.03	666±12	0.98±0.06	1191▲ 1113 ~ 1205	13.7±0.6	
NCS DC73063	Soil	0.062±0.003	36±2	42.6±1.1	0.44±0.04	721±12	1.32±0.06	606±9	15.5±0.6	
NCS DC73064	Soil	0.055±0.003	34±2	40.2±0.9	0.40±0.04	661±11	0.78±0.04	987±24	12.5±0.6	
NCS DC73065	Soil	0.044±0.003	26±3	24.8±0.5	0.32±0.05	590±9	0.72±0.05	840±16	10.0±0.4	
NCS DC73066	Soil	0.031±0.002	22±1	18.1±0.5	0.28±0.02	399±7	0.66±0.05	440±12	7.9±0.5	
		Composition(ug/g)								
		Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc
NCS DC73058	Soil	37.0±1.2	31.0±1.3	752±20	26.6±1.2	9.6±0.6	124±5	227±9	0.80±0.08	12.6±0.4
NCS DC73059	Soil	33.2±2.7	33.8±1.1	729±20	22.2±1.6	8.5±0.4	100±3	124±8	0.87±0.05	13.1±0.5
NCS DC73060	Soil	45.9±1.8	22.3±0.9	806±24	727±16	12.5±1.1	206±9	401±36	18.2±1.2	11.4±0.4
NCS DC73061	Soil	36.0±1.5	17.1±0.8	1249±35	27.0±0.8	9.4±0.5	94±3	494±23	1.1±0.1	11.1±0.4
NCS DC73062	Soil	34.3±1.4	31.3±1.1	1278±24	25±1.3	8.7±0.5	101±3	279±8	1.16±0.05	11.8±0.3
NCS DC73063	Soil	31.8±1.4	25.4±1.2	924±20	24.3±1.2	8.2±0.4	129±3	0.27*±0.02*	0.95±0.03	9.9±0.3
NCS DC73064	Soil	30.1±1.2	31.7±0.9	1121±19	23.1±1.3	7.7±0.4	101±3	348±14	1.18±0.06	11.8±0.4
NCS DC73065	Soil	23.1±1.2	38.4±1.1	718±16	19.5±0.9	6.0±0.4	86±3	368±18	1.01±0.07	10.7±0.3
NCS DC73066	Soil	18.8±1.3	16.2±0.9	241±12	18.8±1.0	4.9±0.3	85±3	141±11	0.76±0.04	6.8±0.2

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		Composition(ug /g)								
		Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*
NCS DC73058	Soil	0.36±0.02	7.1±0.3	3.4±0.2	186±7	1.26±0.10	1.00±0.08	0.049±0.008	13.6±0.7	0.476±0.007
NCS DC73059	Soil	0.23±0.02	6.3±0.3	3.1±0.2	151±4	1.27±0.06	0.94±0.09	(0.05)	11.2±0.5	0.457±0.009
NCS DC73060	Soil	1.3±0.2	9.0±0.4	411±36	26.3±1.3	2.63±0.12	1.34±0.10	(1.6)	23.9±1.2	0.41±0.02
NCS DC73061	Soil	1.2±0.1	6.6±0.4	6.0±0.5	80.1±1.6	1.26±0.08	0.93±0.06	(0.05)	13.9±0.6	0.425±0.010
NCS DC73062	Soil	0.19±0.02	6.5±0.4	3.0±0.2	203±5	1.12±0.07	0.93±0.08	0.039±0.007	13.0±0.6	0.392±0.009
NCS DC73063	Soil	0.21±0.02	6.0±0.3	3.8±0.2	315±9	1.39±0.06	0.90±0.08	0.036±0.006	14.1±0.7	0.313±0.008
NCS DC73064	Soil	0.25±0.02	5.7±0.3	2.7±0.2	297±5	1.02±0.07	0.82±0.04	(0.04)	12.0±0.4	0.348±0.007
NCS DC73065	Soil	0.26±0.02	4.4±0.3	2.1±0.2	221±5	0.85±0.07	0.63±0.05	0.032±0.006	9.8±0.3	0.280±0.006
NCS DC73066	Soil	0.14±0.02	3.5±0.5	1.8±0.2	205±4	0.60±0.04	0.51±0.03	0.041±0.008	7.3±0.3	0.240±0.006
		Composition(ug /g)								
		Tl	Tm	U	V	W	Y	Yb	Zn	
NCS DC73058	Soil	0.73±0.03	0.51±0.06	3.1±0.2	95±3	2.1±0.3	29.9±1.1	3.2±0.2	75±3	
NCS DC73059	Soil	0.58±0.03	0.46±0.04	2.1±0.2	109±3	1.8±0.2	28.6±0.8	2.9±0.2	85±3	
NCS DC73060	Soil	2.13±0.09	0.75±0.04	15.6±0.7	79±3	164±9	43.7±1.3	5.1±0.3	514±16	
NCS DC73061	Soil	0.81±0.04	0.45±0.04	4.4±0.2	136±5	3.0±0.2	27.8±0.9	2.9±0.3	70±3	
NCS DC73062	Soil	0.59±0.03	0.47±0.03	2.6±0.2	83±3	2.1±0.2	27.7±0.9	3.0±0.1	78±2	
NCS DC73063	Soil	0.70±0.03	0.46±0.02	5.7±0.3	68±2	2.2±0.2	27.7±1.0	2.9±0.2	82±2	
NCS DC73064	Soil	0.60±0.03	0.40±0.03	2.8±0.2	82 ▲	80 ~ 86	1.9±0.1	25±0.7	2.6±0.2	72±2
NCS DC73065	Soil	0.50±0.02	0.33±0.03	2.6±0.1	77±2	1.3±0.2	19.6±0.6	2.1±0.2	55±2	
NCS DC73066	Soil	0.53±0.03	0.27±0.03	1.4±0.1	54±2	1.4±0.2	15.8±0.6	1.8±0.2	35±2	
		Composition(ug /g)								
		Zr								
NCS DC73058	Soil	306±9								
NCS DC73059	Soil	260±7								
NCS DC73060	Soil	257±7								
NCS DC73061	Soil	280±13								
NCS DC73062	Soil	264±7								
NCS DC73063	Soil	185±7								
NCS DC73064	Soil	201±6								
NCS DC73065	Soil	140±3								
NCS DC73066	Soil	201±7								
		Composition(%)								
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	FeO	CaO	MgO	Na ₂ O	K ₂ O	H ₂ O+
NCS DC73058	Soil	62.32±0.24	14.84±0.10	5.13±0.10	(1.1)	1.39±0.03	1.24±0.02	1.73±0.05	2.72±0.04	4.90±0.21
NCS DC73059	Soil	66.74±0.25	13.21±0.09	4.98±0.08	1.32±0.05	2.18±0.03	2.07±0.04	1.95±0.03	2.51±0.04	3.13±0.15
NCS DC73060	Soil	65.60±0.19	12.70±0.07	8.29±0.11	1.39±0.09	1.18±0.03	0.92±0.02	0.13±0.01	1.83±0.03	5.03±0.16
NCS DC73061	Soil	73.80±0.28	11.04±0.12	3.84±0.07	(1.1)	0.36±0.01	0.42±0.01	0.26±0.02	1.76±0.03	4.31±0.16
NCS DC73062	Soil	59.83±0.19	12.10±0.10	4.52±0.09	(1.5)	6.42±0.07	2.34±0.03	1.68±0.04	2.46±0.04	3.89±0.12
NCS DC73063	Soil	53.97±0.19	11.92±0.11	4.40±0.07	1.74±0.04	9.33±0.12	3.20±0.04	1.83±0.04	3.11±0.05	3.67±0.13
NCS DC73064	Soil	56.71±0.22	11.90±0.09	4.47±0.10	(1.5)	8.03±0.17	2.70±0.03	1.54±0.03	2.44±0.04	3.86±0.14
NCS DC73065	Soil	65.49±0.20	10.54±0.07	4.00±0.09	1.56±0.05	4.82±0.07	2.79±0.05	1.60±0.04	2.18±0.03	3.31±0.07
NCS DC73066	Soil	74.15±0.32	9.89±0.09	2.63±0.06	0.64±0.05	3.00±0.07	1.04±0.02	1.73±0.05	2.57±0.04	2.25±0.10
		Composition(%)								
		Corg.	CO ₂	TC	L.O.I					
NCS DC73058	Soil	2.07±0.06		2.29±0.06	(9)					
NCS DC73059	Soil	0.76±0.04	(1.1)	1.03±0.03	5.16±0.17					
NCS DC73060	Soil	1.51±0.05		1.68±0.05	7.92±0.22					
NCS DC73061	Soil	1.63±0.06		1.82±0.05	7.16±0.23					
NCS DC73062	Soil	1.06±0.03	4.48±0.15	2.25±0.05	9.42±0.22					
NCS DC73063	Soil	0.52±0.03	6.89±0.13	2.35±0.06	(10.9)					
NCS DC73064	Soil	0.95±0.03	6.13±0.19	2.59±0.06	(10.9)					
NCS DC73065	Soil	0.78±0.03	3.70±0.10	1.73±0.05	7.70±0.20					
NCS DC73066	Soil	0.38±0.02	(1.8)	0.81±0.02	4.31±0.13					

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Number	Name	Composition(ug /g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73067	Soil	0.114±0.009	8.3±1.7	20±3	715±20	2.9±0.3	0.37±0.03	5.2±0.3	0.127±0.007	70
NCS DC73068	Soil	0.081±0.003	6.0±0.3	23±2	657±14	2.4±0.1	0.24±0.03	1.9±0.4	0.074±0.005	70
NCS DC73069	Soil	0.068±0.005	7.6±0.3	28±3	761±28	2.2±0.2	0.27±0.03	3.2±0.3	0.078±0.009	70
NCS DC73070	Soil	0.049±0.005	3.9±0.3	13.2±1.0	544±12	1.6±0.1	0.11±0.01	1.5±0.4	0.042±0.005	70
NCS DC73071	Soil	0.084±0.005	19.9±0.5	68±5	614±15	2.22±0.09	0.38±0.02	3.4±0.4	0.18±0.01	70
NCS DC73072	Soil	0.059±0.004	3.6±0.3	47±3	357±8	3.2±0.3	0.46±0.03	11.8±0.5	0.108±0.005	70
NCS DC73073	Soil	0.084±0.005	10.0±0.3	37±3	468±17	2.2±0.1	0.33±0.03	2.4±0.3	0.19±0.01	70
NCS DC73074	Soil	(0.065)	12.1±0.3	60±3	483±11	2.2±0.2	0.43±0.03	2.1±0.3	0.138±0.007	70
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	Eu
NCS DC73067	Soil	85±3	53±6	11.3±0.5	48±2	9.6±0.6	12.9±0.8	4.8±0.3	2.6±0.1	1.31±0.05
NCS DC73068	Soil	60±2	56±7	7.4±0.3	38±3	6.0±0.3	12.6±0.6	4.1±0.2	2.4±0.1	1.13±0.07
NCS DC73069	Soil	60±3	45±5	10.9±0.3	50±3	6±0.4	17.2±0.8	4.2±0.3	2.44±0.09	1.08±0.04
NCS DC73070	Soil	26±2	42±5	3.8±0.2	(23)	3.4±0.3	(6.4)	1.94±0.05	1.17±0.05	0.58±0.05
NCS DC73071	Soil	64±3	0.345±0.019	18.6±1.0	113±3	8.4±0.4	40.3±1.2	4.5±0.3	2.6±0.2	1.16±0.05
NCS DC73072	Soil	62±3	574±28	8.9±0.3	47±2	7.6±0.3	16.9±0.6	6.3±0.3	3.6±0.3	1.34±0.05
NCS DC73073	Soil	58±2	871±30	12.9±0.5	55±3	6.1±0.3	28±1	5.3±0.2	3.07±0.09	1.20±0.03
NCS DC73074	Soil	57±3	125±7	10.1±0.3	55±3	12.7±0.5	19.8±0.8	4.2±0.3	2.3±0.1	1.05±0.03
		F	Ga	Gd	Ge	Hf	Hg	Ho	I	In
NCS DC73067	Soil	603±28	21.7±0.7	5.8±0.3	1.26±0.08	7.4±0.3	0.055±0.005	0.94±0.06	1.9±0.3	0.061±0.003
NCS DC73068	Soil	365±22	15.6±0.8	4.5±0.2	1.25±0.05	9.3±0.4	0.019±0.003	0.84±0.03	0.70±0.05	0.044±0.004
NCS DC73069	Soil	357±20	17.5±0.7	4.5±0.3	1.33±0.06	5.6±0.3	0.024±0.003	0.85±0.03	2.33±0.09	0.052±0.003
NCS DC73070	Soil	(164)	10.2±0.3	2.0±0.05	1.06±0.04	5.6±0.5	0.014±0.002	0.40±0.03	0.63±0.05	0.019±0.003
NCS DC73071	Soil	750±46	17.5±0.8	4.9±0.3	1.29±0.06	4.1±0.4	0.031±0.003	0.90±0.04	2.0±0.1	0.063±0.003
NCS DC73072	Soil	511±26	15.5±0.7	6.3±0.3	1.33±0.09	6.3±0.3	0.009±0.004	1.30±0.08	1.9±0.3	0.051±0.003
NCS DC73073	Soil	589±26	17.4±0.6	5.2±0.3	1.28±0.06	4.9±0.6	0.012±0.002	1.09±0.05	1.7±0.1	0.061±0.005
NCS DC73074	Soil	697±30	15.1±0.4	4.6±0.3	1.26±0.06	5.2±0.3	0.020±0.002	0.85±0.03	0.76±0.08	0.059±0.005
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni
NCS DC73067	Soil	44.6±1.1	50±3	0.41±0.03	0.107±0.002	2.08±0.09	0.247±0.009	16.7±0.8	38±3	16.8±0.5
NCS DC73068	Soil	31.8±0.9	27±2	0.40±0.02	505±10	0.86±0.13	0.111±0.002	13.4±0.4	28.1±0.9	13.6±0.8
NCS DC73069	Soil	31.5±1.2	25±2	0.40±0.03	700±13	0.50±0.05	692±26	12.9±0.7	27.1±1.1	21.5±0.8
NCS DC73070	Soil	14.4±0.6	13.2±0.5	0.21±0.01	230±6	0.38±0.03	351±26	7.4±0.5	12.1±0.3	10.0±0.5
NCS DC73071	Soil	34.0±1.2	39.3±1.4	0.40±0.02	879±20	1.92±0.09	592±24	12.8±0.6	29.2±0.8	63±2
NCS DC73072	Soil	34±1.3	29±1	0.56±0.04	550±10	0.99±0.05	808±24	11.2±0.6	33.4±1.2	22.2±0.7
NCS DC73073	Soil	30±2	31±1	0.52±0.03	800±10	(1.1)	637±22	12.0±0.6	28.2±0.6	27±1
NCS DC73074	Soil	30±1	50±3	0.35±0.03	564±10	0.68±0.04	605±22	13.5±0.6	26.2±0.6	27.2±1.2
		P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
NCS DC73067	Soil	990±26	26.4±1.3	10.0±0.5	130±4	~0.003	351±17	(0.5)	10.8±0.5	0.137±0.006
NCS DC73068	Soil	411±8	21.4±0.7	7.3±0.3	111±3	~0.002	229±5	(0.47)	8.2±0.5	0.121±0.009
NCS DC73069	Soil	499±10	23.1±1.2	7.0±0.3	122±4	~0.002	104±5	0.58±0.05	9.6±0.5	0.152±0.006
NCS DC73070	Soil	162±8	15.8±0.8	3.2±0.2	106±3	~0.002	107±5	0.37±0.04	3.2±0.2	0.072±0.005
NCS DC73071	Soil	559±9	25.0±1.1	7.5±0.4	110±3	~0.004	0.369±0.001	1.58±0.07	15.6±0.5	0.42±0.03
NCS DC73072	Soil	862±16	20.0±0.8	8.4±0.3	109±5	~0.003	0.213±0.009	0.39±0.04	10.7±0.5	0.21±0.03
NCS DC73073	Soil	885±13	20.2±0.9	7.1±0.3	94±3	~0.002	0.123±0.005	1.00±0.05	14.0±0.3	0.29±0.01
NCS DC73074	Soil	890±12	20.1±1.2	6.9±0.3	128±3	~0.002	(206)	0.73±0.03	10.6±0.3	0.128±0.005

Section 4 Mineral & Geology(Powder)

		Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl
NCS DC73067	Soil	6.8±0.3	2.9±0.2	252±4	1.3±0.1	0.87±0.04	0.039±0.007	14.5±1.1	0.442±0.007	0.82±0.05
NCS DC73068	Soil	5.2±0.2	2.4±0.3	213±4	1.04±0.05	0.73±0.03	0.034±0.005	10.1±1.0	0.355±0.007	0.68±0.03
NCS DC73069	Soil	5.1±0.3	2.7±0.2	155±3	1.03±0.07	0.72±0.03	0.038±0.005	10.5±0.8	0.336±0.052	0.74±0.06
NCS DC73070	Soil	2.3±0.1	1.4±0.3	138±3	0.60±0.05	0.33±0.02	(0.021)	4.6±0.3	0.189±0.006	0.67±0.03
NCS DC73071	Soil	5.5±0.2	2.7±0.3	308±6	0.99±0.07	0.78±0.04	0.052±0.005	12.5±0.8	0.361±0.008	0.68±0.03
NCS DC73072	Soil	7.0±0.3	2.7±0.2	178±4	1.05±0.09	1.10±0.06	(0.033)	11.9±1.3	0.290±0.008	0.62±0.03
NCS DC73073	Soil	5.6±0.2	2.4±0.3	285±6	0.93±0.09	0.89±0.03	0.049±0.007	9.7±1.0	0.374±0.011	0.56±0.03
NCS DC73074	Soil	5.1±0.2	4.0±0.3	227±5	1.3±0.1	0.75±0.03	0.032±0.006	10.5±0.5	0.311±0.004	0.75±0.03
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *
NCS DC73067	Soil	0.42±0.03	7.9±0.5	72±2	1.92±0.05	25.5±0.6	2.7±0.2	95±3	260±7	60.21±0.20
NCS DC73068	Soil	0.39±0.03	3.0±0.2	51±3	1.7±0.2	22.8±0.7	2.6±0.1	53±3	330±9	70.86±0.19
NCS DC73069	Soil	0.39±0.02	2.2±0.2	67±3	1.7±0.2	22.6±0.6	2.6±0.1	63±3	187±4	68.47±0.24
NCS DC73070	Soil	0.20±0.02	0.97±0.04	28±1	0.64±0.06	12.4±0.3	1.32±0.05	21±3	206±4	81.68±0.24
NCS DC73071	Soil	0.40±0.03	3.4±0.3	107±5	1.71±0.09	23.8±0.5	2.60±0.08	80±2	137±4	53.00±0.20
NCS DC73072	Soil	0.57±0.03	12.5±0.5	59±4	2.7±0.2	34.9±1.1	3.7±0.3	53±3	200±6	68.33±0.26
NCS DC73073	Soil	0.51±0.03	3.2±0.2	90±3	1.4±0.1	28.2±0.7	3.3±0.2	81±2	171±4	58.84±0.24
NCS DC73074	Soil	0.37±0.03	3.3±0.2	66±3	2.5±0.2	23±1	2.3±0.1	65±1	180±4	60.93±0.48
		Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	CaO*	MgO*	Na ₂ O*	K ₂ O*	TC*	Corg*
NCS DC73067	Soil	16.12±0.21	4.27±0.10	~1.71	1.23±0.03	1.16±0.02	2.42±0.07	2.87±0.04	2.96±0.07	2.75±0.09
NCS DC73068	Soil	12.73±0.17	2.99±0.05	~0.89	1.19±0.03	0.73±0.03	2.36±0.05	2.99±0.03	1.41±0.05	1.34±0.05
NCS DC73069	Soil	14.23±0.17	3.96±0.14	~0.58	1.06±0.03	0.94±0.03	1.83±0.05	3.27±0.10	0.72±0.17	0.68±0.03
NCS DC73070	Soil	8.65±0.18	1.44±0.03	~0.64	0.73±0.03	0.43±0.02	1.82±0.05	3.02±0.03	0.32±0.03	0.28±0.03
NCS DC73071	Soil	13.47±0.20	5.78±0.07	~1.95	6.69±0.14	4.18±0.12	1.90±0.05	2.70±0.07	2.02±0.05	0.69±0.03
NCS DC73072	Soil	12.54±0.22	3.36±0.03	~1.52	2.59±0.05	1.63±0.03	3.21±0.08	2.57±0.03	0.85±0.04	0.71±0.04
NCS DC73073	Soil	13.70±0.24	4.84±0.07	~1.39	5.47±0.05	2.64±0.07	2.81±0.07	2.69±0.05	1.30±0.05	0.54±0.03
NCS DC73074	Soil	11.69±0.19	3.79±0.05	~1.85	7.28±0.11	2.38±0.05	2.15±0.05	2.59±0.03	1.95±0.05	0.55±0.03
		LOI*								
NCS DC73067	Soil	~10.57								
NCS DC73068	Soil	~5.15								
NCS DC73069	Soil	~5.51								
NCS DC73070	Soil	~1.59								
NCS DC73071	Soil	~11.45								
NCS DC73072	Soil	~4.57								
NCS DC73073	Soil	~7.41								
NCS DC73074	Soil	~8.31								

Value with* is in percent.

Section 4 Mineral & Geology(Powder)

Number	Name	Composition(ug /g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73075	Soil	0.069±0.005	17.1±0.5	54±5	503±19	2.0±0.10	0.27±0.02	1.8±0.3	0.160±0.005	70
NCS DC73076	Soil	0.067±0.004	21.2±0.7	58±3	457±11	2.7±0.1	0.38±0.02	2.1±0.3	0.130±0.006	70
NCS DC73077	Soil	0.059±0.004	16.8±0.5	74±7	356±33	1.7±0.2	0.25±0.02	4.0±0.3	0.109±0.005	70
NCS DC73078	Soil	0.075±0.004	6.8±0.3	40±3	341±13	2.1±0.1	0.29±0.03	(0.77)	0.066±0.009	70
NCS DC73079	Soil	0.055±0.005	15.2±0.5	68±5	383±11	2.6±0.2	0.29±0.02	(0.7)	(0.08)	70
NCS DC73080	Soil	0.085±0.007	5.7±0.5	27±3	431±11	2.4±0.2	0.31±0.02	1.4±0.3	0.18±0.01	70
NCS DC73081	Soil	(0.07)	12.3±0.2	42±2	572±15	1.57±0.07	0.25±0.02	1.5±0.4	0.146±0.005	70
NCS DC73082	Soil	0.053±0.005	14.3±0.3	51±4	429±13	1.7±0.1	0.27±0.02	1.6±0.3	0.113±0.005	70
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	Eu
NCS DC73075	Soil	56±3	156±6	11.0±0.5	57±3	14.8±0.4	22±1	4.2±0.2	2.40±0.09	1.03±0.05
NCS DC73076	Soil	58±2	116±5	13.4±0.6	110±7	16.3±0.6	22±2	3.8±0.2	2.1±0.1	1.02±0.06
NCS DC73077	Soil	48±2	57±6	10.4±0.6	70±5	20.3±0.7	18.6±0.9	3.07±0.09	1.75±0.07	0.86±0.04
NCS DC73078	Soil	69±3	428±17	12.9±0.8	82±6	9.0±0.3	16.2±0.9	4.3±0.2	2.45±0.09	1.23±0.05
NCS DC73079	Soil	75±3	(32)	11.7±0.8	74±5	15.5±0.5	24±1	4.0±0.3	2.0±0.2	1.30±0.06
NCS DC73080	Soil	79±3	71±9	7.6±0.3	34±3	8.8±0.4	16.0±0.5	4.7±0.4	2.6±0.3	1.19±0.05
NCS DC73081	Soil	55±3	480±22	12.6±1.0	80±3	4.8±0.3	27.0±1.0	4.1±0.3	2.3±0.2	1.05±0.05
NCS DC73082	Soil	54±1	633±34	9.6±0.3	48±3	5.9±0.3	21±1	3.9±0.3	2.2±0.1	1.01±0.03
		F	Ga	Gd	Ge	Hf	Hg	Ho	I	In
NCS DC73075	Soil	617±24	14.4±0.8	4.5±0.3	1.15±0.07	4.9±0.2	0.029±0.001	0.85±0.04	1.08±0.08	0.050±0.005
NCS DC73076	Soil	471±17	15.5±0.4	4.1±0.2	1.3±0.1	4.9±0.7	0.025±0.002	0.75±0.01	1.42±0.09	0.046±0.003
NCS DC73077	Soil	613±30	12.1±0.9	3.4±0.2	1.15±0.09	4.0±0.4	0.028±0.003	0.62±0.02	2.6±0.2	0.039±0.004
NCS DC73078	Soil	535±17	16.7±0.6	5.0±0.3	1.37±0.06	5.4±0.5	0.011±0.003	0.86±0.03	0.41±0.05	0.053±0.005
NCS DC73079	Soil	403±15	15±2	5.2±0.3	1.48±0.07	5.2±0.3	0.015±0.003	0.76±0.06	(0.44)	0.048±0.003
NCS DC73080	Soil	422±13	14.6±0.5	5.5±0.3	1.24±0.06	8.4±1.2	0.101±0.009	0.94±0.05	0.65±0.08	0.042±0.005
NCS DC73081	Soil	526±28	13.4±0.5	4.4±0.3	1.20±0.03	5.2±0.5	0.018±0.003	0.82±0.03	0.90±0.05	0.049±0.003
NCS DC73082	Soil	459±24	12.9±0.5	4.2±0.3	1.20±0.04	5.8±0.4	0.019±0.002	0.79±0.03	1.01±0.08	0.044±0.004
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni
NCS DC73075	Soil	30±1	38±2	0.36±0.02	592±12	0.86±0.06	552±18	12.1±0.7	25.6±0.9	28.2±1.1
NCS DC73076	Soil	31±1	37±2	0.34±0.02	559±9	0.63±0.06	(540)	11.1±0.4	25±1	83±3
NCS DC73077	Soil	26±2	40±3	0.28±0.03	532±16	0.42±0.03	639±28	10.0±0.7	21.3±0.8	36±2
NCS DC73078	Soil	37.0±0.7	39±2	0.39±0.02	669±14	0.43±0.03	356±22	12.8±0.6	31.1±0.8	32.4±0.6
NCS DC73079	Soil	38±2	46±3	0.29±0.03	496±11	0.53±0.03	366±20	12.0±0.5	33.8±1.2	41±1
NCS DC73080	Soil	41±2	22.0±1.1	0.38±0.03	627±13	0.62±0.03	655±24	12.5±0.6	34.3±1.1	14.1±0.9
NCS DC73081	Soil	28.8±1.3	25.2±1.2	0.38±0.03	626±16	0.85±0.03	276±15	11.1±0.6	25.5±0.8	32.5±0.8
NCS DC73082	Soil	28±1	30±2	0.33±0.03	509±13	0.60±0.03	418±17	10.6±0.7	24.6±0.3	23±2
		P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
NCS DC73075	Soil	671±12	20.3±1.3	6.7±0.3	100±3	~0.002	262±17	1.39±0.05	10.7±0.3	0.16±0.06
NCS DC73076	Soil	556±9	26.3±1.1	6.7±0.3	121±3	~0.002	315±13	1.31±0.06	11.0±0.3	0.19±0.01
NCS DC73077	Soil	432±12	18.0±1.2	5.5±0.3	93±3	~0.002	324±17	0.80±0.03	8.6±0.5	0.11±0.01
NCS DC73078	Soil	372±12	22.8±0.6	8.2±0.3	118±3	~0.001	(87)	0.55±0.03	12.1±0.3	0.074±0.005
NCS DC73079	Soil	491±9	24.9±1.3	8.7±0.3	101±2	~0.002	(73)	2.6±0.3	10.1±0.4	0.118±0.005
NCS DC73080	Soil	0.11±0.003*	25±2	9.2±0.5	110±3	~0.002	132±5	0.33±0.03	8.2±0.4	0.087±0.005
NCS DC73081	Soil	556±10	19.3±0.7	6.5±0.3	79±3	~0.001	0.229±0.003	0.88±0.05	11.7±0.4	0.27±0.01
NCS DC73082	Soil	612±15	18.7±0.6	6.5±0.2	82±2	~0.004	291±12	1.8±0.2	9.2±0.3	0.107±0.005

Section 4 Mineral & Geology(Powder)

		Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl
NCS DC73075	Soil	5.0±0.3	2.7±0.3	259±6	0.98±0.09	0.75±0.03	0.036±0.004	10.4±0.3	0.316±0.006	0.63±0.03
NCS DC73076	Soil	4.7±0.3	2.6±0.2	219±4	0.96±0.09	0.67±0.03	0.047±0.007	13.8±0.5	0.298±0.005	0.72±0.05
NCS DC73077	Soil	4.0±0.3	1.9±0.2	477±11	0.75±0.09	0.55±0.03	0.040±0.004	9.0±0.3	0.273±0.008	0.52±0.03
NCS DC73078	Soil	5.8±0.3	2.6±0.1	98±2	0.99±0.07	0.78±0.03	0.046±0.005	13.7±0.5	0.394±0.009	0.64±0.03
NCS DC73079	Soil	6.3±0.3	2.6±0.2	141±2	0.89±0.05	0.77±0.04	(0.054)	11.1±0.3	0.351±0.009	0.57±0.04
NCS DC73080	Soil	6.3±0.3	2.8±0.2	214±3	1.08±0.07	0.86±0.04	(0.028)	16.0±0.6	0.282±0.006	0.64±0.03
NCS DC73081	Soil	4.9±0.2	2.1±0.1	189±6	0.85±0.05	(0.71)	0.042±0.005	9.8±0.9	0.334±0.006	0.51±0.03
NCS DC73082	Soil	4.8±0.2	2.3±0.3	233±3	0.81±0.07	0.68±0.04	0.038±0.007	9.0±0.5	0.313±0.008	0.51±0.03
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *
NCS DC73075	Soil	0.37±0.03	2.7±0.3	71±3	1.8±0.2	22.6±0.6	2.37±0.09	65±2	165±4	57.08±0.46
NCS DC73076	Soil	0.34±0.01	2.3±0.9	75±4	2.0±0.2	20.4±0.5	2.18±0.08	64±2	169±7	63.89±0.46
NCS DC73077	Soil	0.28±0.02	2.2±0.2	67±3	1.3±0.1	16.5±0.5	1.81±0.09	52±2	133±5	49.83±0.44
NCS DC73078	Soil	0.39±0.02	1.94±0.08	99±3	1.5±0.1	22.6±0.6	2.52±0.07	76±3	184±6	64.37±0.26
NCS DC73079	Soil	0.32±0.03	1.3±0.2	79±3	1.6±0.2	20.7±1.0	1.9±0.2	66±3	179±6	68.11±0.26
NCS DC73080	Soil	0.40±0.03	2.6±0.3	57±3	1.99±0.08	25.7±1.1	2.6±0.3	67±2	264±5	73.16±0.22
NCS DC73081	Soil	0.37±0.03	2.6±0.1	79±4	1.42±0.07	21.9±0.8	2.4±0.2	62±3	176±4	61.47±0.44
NCS DC73082	Soil	0.34±0.02	2.1±0.1	60±2	1.8±0.2	21.5±0.5	2.19±0.06	57±2	201±4	65.18±0.26
		Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	CaO*	MgO*	Na ₂ O*	K ₂ O*	TC*	Corg*
NCS DC73075	Soil	11.20±0.20	3.96±0.09	~1.71	9.44±0.16	2.61±0.05	1.88±0.03	2.42±0.03	2.44±0.07	0.48±0.04
NCS DC73076	Soil	13.03±0.08	4.08±0.05	~0.79	4.42±0.08	2.37±0.05	2.07±0.06	2.70±0.02	0.99±0.04	0.34±0.04
NCS DC73077	Soil	9.54±0.13	3.46±0.09	~0.86	15.26±0.32	1.98±0.05	1.01±0.03	2.09±0.05	3.81±0.10	0.44±0.03
NCS DC73078	Soil	13.50±0.20	5.70±0.09	~0.69	3.46±0.08	1.82±0.03	0.54±0.03	2.24±0.03	0.80±0.03	(0.12)
NCS DC73079	Soil	11.48±0.15	4.46±0.11	~1.35	4.22±0.10	1.50±0.03	1.44±0.03	2.16±0.03	0.91±0.03	0.17±0.02
NCS DC73080	Soil	12.15±0.22	3.15±0.05	~1.10	1.95±0.05	0.97±0.03	2.29±0.03	2.50±0.03	0.69±0.04	0.66±0.03
NCS DC73081	Soil	10.74±0.16	4.31±0.05	~1.83	6.62±0.12	3.09±0.05	1.72±0.05	2.12±0.09	1.70±0.09	0.30±0.03
NCS DC73082	Soil	10.58±0.15	3.70±0.07	~1.69	6.28±0.10	1.77±0.05	2.10±0.04	2.03±0.03	1.69±0.03	0.36±0.03
		LOI*								
NCS DC73075	Soil	~10.46								
NCS DC73076	Soil	~6.37								
NCS DC73077	Soil	~16.17								
NCS DC73078	Soil	~7.18								
NCS DC73079	Soil	~5.69								
NCS DC73080	Soil	~2.72								
NCS DC73081	Soil	~8.85								
NCS DC73082	Soil	~7.49								

Value with* is in percent.

Section 4 Mineral & Geology(Powder)

Number	Name	Composition(ug /g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73083	Soil	0.080±0.003	9.1±0.3	60±5	492±15	1.94±0.09	0.34±0.03	4.6±0.5	0.18±0.02	70
NCS DC73084	Soil	0.071±0.017	12.8±0.3	49±3	513±16	2.07±0.07	0.33±0.02	3.8±0.3	0.156±0.007	70
NCS DC73085	Soil	0.098±0.004	13.0±0.5	56±3	600±13	2.5±0.2	0.45±0.03	1.8±0.3	0.29±0.03	70
NCS DC73086	Soil	0.074±0.005	11.0±0.5	62±5	509±10	2.0±0.2	0.36±0.03	3.6±0.4	0.104±0.005	70
NCS DC73087	Soil	0.131±0.007	6.6±0.3	70±3	435±10	1.88±0.10	0.38±0.03	3.0±0.4	0.171±0.011	70
NCS DC73088	Soil	0.122±0.005	5.0±0.4	65±5	570±15	2.38±0.08	0.45±0.03	1.8±0.3	0.28±0.03	70
NCS DC73089	Soil	0.115±0.007	8.9±0.3	53±3	605±17	2.2±0.2	0.31±0.03	2.6±0.3	0.166±0.007	70
NCS DC73090	Soil	0.077±0.003	3.9±0.3	41±3	585±15	2.1±0.2	0.29±0.03	(1)	0.131±0.005	70
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	Eu
NCS DC73083	Soil	69±3	141±8	11.6±1.1	64±3	5.6±0.3	57±2	4.8±0.2	2.8±0.2	1.22±0.05
NCS DC73084	Soil	68±3	66±3	13.5±0.5	70±3	8.0±0.3	25±1	4.7±0.3	2.7±0.2	1.20±0.03
NCS DC73085	Soil	80±3	58±6	16.1±0.6	85±3	8.7±0.5	32.5±1.2	5.6±0.3	3.2±0.2	1.42±0.05
NCS DC73086	Soil	76±3	41±4	15.0±0.8	90±3	6.9±0.5	25.4±1.0	5.4±0.3	3.1±0.3	1.28±0.05
NCS DC73087	Soil	88±8	73±4	10.9±0.5	59±3	5.3±0.3	62±3	5.5±0.3	3.1±0.3	1.36±0.05
NCS DC73088	Soil	81±3	65±4	15.1±0.7	(448)	9.6±0.7	31±2	5.5±0.3	3.1±0.2	1.41±0.05
NCS DC73089	Soil	69±3	58±7	12.4±0.5	66±3	9.6±0.3	27.1±0.6	4.6±0.3	2.5±0.2	1.24±0.05
NCS DC73090	Soil	75±3	55±5	14.4±1.0	63±3	6.2±0.3	26.2±0.9	4.3±0.2	2.46±0.07	1.19±0.05
		F	Ga	Gd	Ge	Hf	Hg	Ho	I	In
NCS DC73083	Soil	537±20	14.8±0.7	5.3±0.3	1.32±0.06	8.4±0.7	0.069±0.005	0.97±0.03	1.9±0.2	0.051±0.003
NCS DC73084	Soil	653±26	16.0±0.8	5.2±0.3	1.29±0.03	5.7±0.3	0.025±0.003	0.95±0.03	2.0±0.3	0.055±0.003
NCS DC73085	Soil	622±24	18.3±0.6	6.2±0.2	1.47±0.06	7.0±0.5	0.161±0.009	1.12±0.03	0.95±0.08	0.065±0.006
NCS DC73086	Soil	431±24	15.1±0.7	5.7±0.3	1.42±0.07	9.8±0.7	0.049±0.005	1.08±0.05	1.5±0.2	0.051±0.003
NCS DC73087	Soil	402±17	13.3±0.4	6.1±0.3	1.37±0.09	9.5±1.0	0.134±0.007	1.10±0.06	1.05±0.08	(0.057)
NCS DC73088	Soil	649±22	20.5±0.7	5.8±0.2	1.50±0.07	7.0±0.5	0.19±0.01	1.11±0.03	0.56±0.07	0.077±0.003
NCS DC73089	Soil	588±17	16.6±0.9	5.2±0.3	1.3±0.1	5.8±0.3	0.21±0.01	0.90±0.05	1.51±0.08	0.052±0.005
NCS DC73090	Soil	531±26	18.0±0.6	4.9±0.3	1.39±0.05	7.0±0.5	0.044±0.004	0.87±0.03	(0.61)	0.054±0.003
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni
NCS DC73083	Soil	36±2	33.8±0.9	0.44±0.03	572±10	0.79±0.04	0.146±0.006*	14.3±0.7	32±3	27.7±0.6
NCS DC73084	Soil	36±1	38±2	0.42±0.02	659±11	(0.74)	665±24	13.7±0.6	30.5±0.8	34±1
NCS DC73085	Soil	42±2	43±2	0.48±0.02	701±12	0.79±0.07	0.149*±0.004	15.9±0.7	36.6±1.1	38±1
NCS DC73086	Soil	39±2	31.8±1.1	0.48±0.03	878±16	0.50±0.03	666±30	15.7±0.6	33.6±1.1	34.8±0.8
NCS DC73087	Soil	44±2	29.0±1.1	0.47±0.03	479±13	0.58±0.03	0.124±0.005*	17.7±0.6	38±2	23.0±0.7
NCS DC73088	Soil	41±1	57±3	0.49±0.02	519±13	0.66±0.05	0.239±0.009*	16.4±0.6	36±2	38±1
NCS DC73089	Soil	38±2	43±2	0.40±0.03	632±12	0.64±0.03	682±28	13.1±0.6	32±1	36±4
NCS DC73090	Soil	40.0±1.3	35.6±1.0	0.39±0.03	749±11	0.32±0.03	591±22	15.1±0.5	31.8±1.0	26.3±0.5
		P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
NCS DC73083	Soil	(0.158) *	25±2	8.3±0.3	86±3	~0.002	322±15	0.90±0.05	10.8±0.3	0.38±0.03
NCS DC73084	Soil	750±9	22±2	8.0±0.3	101±3	~0.002	173±9	1.07±0.06	12.6±0.4	0.168±0.009
NCS DC73085	Soil	876±16	33±2	9.5±0.3	115±3	~0.003	286±7	1.19±0.09	13.9±0.5	0.25±0.02
NCS DC73086	Soil	421±10	24.8±1.2	8.7±0.4	96±3	~0.003	119±5	1.02±0.05	13.0±0.5	0.157±0.006
NCS DC73087	Soil	584±11	71±2	9.8±0.4	78±3	~0.002	216±9	4.3±0.3	9.6±0.5	0.30±0.03
NCS DC73088	Soil	413±9	41±2	9.2±0.3	117±3	~0.004	459±19	0.72±0.05	15.9±0.8	0.28±0.03
NCS DC73089	Soil	693±20	24.4±1.0	8.3±0.3	102±3	~0.003	170±8	0.70±0.04	10.6±0.3	0.099±0.005
NCS DC73090	Soil	362±7	25.4±1.1	8.4±0.3	106±3	~0.002	119±5	0.49±0.03	10.5±0.5	0.10±0.01

Section 4 Mineral & Geology(Powder)

		Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl
NCS DC73083	Soil	6.0±0.3	4.6±0.3	174±3	1.08±0.07	0.85±0.05	(0.038)	11.4±0.7	0.407±0.008	0.53±0.03
NCS DC73084	Soil	5.8±0.3	3.0±0.3	211±3	1.05±0.05	0.84±0.03	0.044±0.007	11.5±0.6	0.385±0.006	0.63±0.04
NCS DC73085	Soil	7.0±0.3	4.0±0.3	162±2	1.20±0.09	1±0.03	(0.049)	13.8±0.9	0.461±0.009	0.70±0.03
NCS DC73086	Soil	6.3±0.3	3.4±0.3	105±3	1.19±0.07	0.93±0.05	(0.04)	12.7±1.2	0.470±0.011	0.56±0.04
NCS DC73087	Soil	6.9±0.3	12.1±0.7	111±3	1.31±0.09	0.96±0.07	0.040±0.005	13.0±0.7	0.500±0.014	0.50±0.03
NCS DC73088	Soil	6.6±0.3	4.2±0.5	111±3	1.19±0.01	0.95±0.03	0.040±0.005	13.7±0.9	0.537±0.010	0.75±0.03
NCS DC73089	Soil	5.9±0.3	2.5±0.2	130±3	1.00±0.09	0.81±0.05	(0.042)	12.3±0.5	0.344±0.011	0.63±0.03
NCS DC73090	Soil	5.6±0.3	2.6±0.3	134±3	1.11±0.05	0.77±0.03	(0.042)	11.9±1.0	0.434±0.008	0.64±0.03
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *
NCS DC73083	Soil	0.44±0.03	2.4±0.2	76±3	1.9±0.2	26.2±1.0	2.8±0.2	120±3	294±6	65.27±0.20
NCS DC73084	Soil	0.42±0.03	2.5±0.2	84±2	1.84±0.07	25±1	2.7±0.2	71±2	191±4	58.76±0.46
NCS DC73085	Soil	0.50±0.03	2.6±0.2	102±3	2.2±0.2	29.8±0.6	3.2±0.2	101±2	253±6	65.32±0.32
NCS DC73086	Soil	0.49±0.03	2.5±0.3	92±4	2.1±0.2	29.3±0.7	3.1±0.3	56±2	348±8	71.11±0.22
NCS DC73087	Soil	0.49±0.03	2.7±0.2	70±4	2.2±0.2	30.4±0.9	3.1±0.3	180±5	318±6	74.76±0.20
NCS DC73088	Soil	0.50±0.03	3.5±0.3	118±3	1.9±0.2	30.1±0.9	3.2±0.2	111±3	250±8	62.03±0.28
NCS DC73089	Soil	0.41±0.03	2.4±0.2	77±3	1.5±0.1	24±1	2.5±0.2	70±2	202±6	62.62±0.14
NCS DC73090	Soil	0.38±0.03	2.1±0.1	81±3	1.6±0.2	23.6±0.9	2.5±0.2	75±3	249±5	68.21±0.17
		Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	CaO*	MgO*	Na ₂ O*	K ₂ O*	TC*	Corg*
NCS DC73083	Soil	11.91±0.19	4.22±0.09	~1.23	3.88±0.07	1.78±0.03	1.75±0.03	2.26±0.02	2.12±0.05	1.45±0.05
NCS DC73084	Soil	12.47±0.19	4.67±0.07	~1.26	7.12±0.09	2.35±0.05	1.61±0.03	2.40±0.03	1.91±0.05	0.52±0.03
NCS DC73085	Soil	14.10±0.22	5.45±0.07	~1.53	1.43±0.03	1.70±0.05	1.62±0.03	2.41±0.02	1.60±0.05	1.50±0.05
NCS DC73086	Soil	12.23±0.16	4.78±0.11	~0.74	1.23±0.03	1.15±0.03	1.32±0.04	2.12±0.05	0.60±0.05	0.59±0.03
NCS DC73087	Soil	10.57±0.17	3.62±0.12	~1.09	0.81±0.03	0.69±0.03	1.51±0.03	1.60±0.05	1.27±0.03	1.23±0.03
NCS DC73088	Soil	16.06±0.28	4.14±0.07	~1.90	1.22±0.03	2.09±0.11	0.99±0.03	2.59±0.04	2.33±0.05	2.23±0.09
NCS DC73089	Soil	12.80±0.20	4.21±0.05	~0.62	5.66±0.07	1.43±0.03	1.44±0.03	2.31±0.05	1.41±0.05	0.42±0.03
NCS DC73090	Soil	13.71±0.18	4.85±0.07	~0.74	0.95±0.03	1.66±0.03	1.41±0.03	2.48±0.03	0.46±0.03	0.45±0.03
		LOI*								
NCS DC73083	Soil	~7.71								
NCS DC73084	Soil	~9.55								
NCS DC73085	Soil	~6.77								
NCS DC73086	Soil	~4.62								
NCS DC73087	Soil	~5.09								
NCS DC73088	Soil	~9.35								
NCS DC73089	Soil	~8.58								
NCS DC73090	Soil	~5.84								

Value with* is in percent.

Section 4 Mineral & Geology(Powder)

Number	Name	Composition(ug /g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73091	Soil	0.060±0.005	11.7±0.5	80±5	517±17	2.5±0.2	0.35±0.03	1.5±0.3	0.131±0.005	70
NCS DC73092	Soil	-0.028	5.4±0.3	14.8±1.0	652±24	2.6±0.2	0.28±0.02	2.8±0.3	(0.03)	70
NCS DC73093	Soil	0.071±0.005	37±3	52±3	297±14	2.5±0.2	0.91±0.04	(1.9)	0.104±0.011	70
NCS DC73094	Soil	0.087±0.005	7.5±1.9	88±7	285±8	4.7±0.3	0.62±0.03	(0.8)	0.36±0.03	70
NCS DC73095	Soil	0.088±0.012	33±2	125±10	259±10	2.6±0.2	1.00±0.05	10.4±0.5	0.69±0.05	70
NCS DC73096	Soil	0.041±0.004	3.8±0.3	13.4±1.0	(74)	1.89±0.08	2.1±0.2	2.9±0.3	(0.035)	70
NCS DC73097	Soil	(0.049)	18.1±0.5	74±5	171±11	1.40±0.07	1.22±0.06	(1.4)	0.114±0.003	70
NCS DC73098	Soil	0.128±0.009	35.6±1.4	144±11	615±17	3.0±0.3	0.86±0.03	2.7±0.4	0.30±0.03	70
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	Eu
NCS DC73091	Soil	95±3	(39)	16.7±0.6	83±5	7.7±0.5	29.4±1.0	6.2±0.3	3.4±0.3	1.57±0.05
NCS DC73092	Soil	121±6	(33)	5.4±0.3	31±3	11.6±0.3	-5	3.0±0.2	1.57±0.07	1.16±0.03
NCS DC73093	Soil	81±3	(50)	16.8±0.8	121±5	18.3±0.7	59±2	5.4±0.3	3.3±0.2	1.25±0.06
NCS DC73094	Soil	95±3	(30)	21.9±0.8	95±3	10.3±0.5	37.2±1.1	7.9±0.3	4.6±0.3	1.87±0.05
NCS DC73095	Soil	176±6	(34)	30.3±1.3	166±4	17.3±1.0	76±2	6.3±0.5	3.8±0.3	1.27±0.05
NCS DC73096	Soil	90±5	49±5	8.8±0.3	37±2	4.0±0.3	16.0±1.1	1.7±0.1	0.94±0.07	0.49±0.03
NCS DC73097	Soil	92±5	42±4	6±0.3	67±3	3.8±0.3	25.8±0.9	2.77±0.09	1.71±0.08	0.69±0.03
NCS DC73098	Soil	94±5	64±3	17.6±0.7	118±3	12.4±0.5	41±2	6.0±0.2	3.2±0.2	1.55±0.03
		F	Ga	Gd	Ge	Hf	Hg	Ho	I	In
NCS DC73091	Soil	532±32	18.2±0.7	7.0±0.3	1.55±0.06	9.4±0.6	0.056±0.003	1.22±0.07	2.3±0.2	0.063±0.005
NCS DC73092	Soil	540±38	30.9±1.2	5.0±0.3	1.01±0.05	9.3±0.7	0.062±0.003	0.56±0.03	4.6±0.3	0.062±0.005
NCS DC73093	Soil	909±52	32.3±1.0	5.8±0.3	2.1±0.2	5.7±0.7	0.33±0.03	1.12±0.06	2.2±0.1	0.122±0.007
NCS DC73094	Soil	0.125±0.006*	29.1±0.8	8.4±0.5	2.22±0.12	5.1±0.5	0.069±0.005	1.6±0.1	0.7±0.1	0.106±0.005
NCS DC73095	Soil	0.162±0.013*	30.0±0.8	6.6±0.4	1.78±0.11	12.6±1.2	0.25±0.03	1.30±0.07	8.0±0.9	0.120±0.008
NCS DC73096	Soil	212±10	21.7±1.0	2.4±0.3	1.6±0.1	8.6±1.0	0.053±0.003	0.35±0.02	5.3±0.7	0.069±0.006
NCS DC73097	Soil	250±12	19.5±1.0	3.3±0.3	2.3±0.2	(8.9)	0.047±0.003	0.58±0.03	3.4±0.2	0.101±0.009
NCS DC73098	Soil	635±24	21.9±0.7	6.9±0.3	1.47±0.09	7.8±0.5	0.060±0.004	1.16±0.06	1.25±0.09	0.089±0.005
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni
NCS DC73091	Soil	49±3	42.7±1.1	0.51±0.03	816±17	0.67±0.04	492±22	18.7±0.6	42±3	37.1±1.3
NCS DC73092	Soil	60±3	24.8±0.8	0.23±0.02	123±5	0.67±0.04	-261	19.9±0.8	41.8±0.9	10.6±0.8
NCS DC73093	Soil	49±2	96±3	0.54±0.03	318±8	3.2±0.2	762±34	19.3±0.7	38±2	80±3
NCS DC73094	Soil	57±3	106±3	0.68±0.03	919±22	0.43±0.03	696±30	21.4±1.1	45±3	39.3±1.0
NCS DC73095	Soil	57±2	76±4	0.62±0.05	0.398±0.008*	2.7±0.3	867±30	35±2	39±2	60±2
NCS DC73096	Soil	21.3±0.7	23.8±1.3	0.17±0.03	189±7	7.3±0.3	309±20	23.2±0.9	16.2±0.6	16.9±0.8
NCS DC73097	Soil	30.6±1.1	13.0±0.3	0.32±0.03	247±8	1.35±0.08	218±18	17.6±0.7	22.0±1.0	15.5±0.6
NCS DC73098	Soil	47±2	33±3	0.44±0.03	648±11	1.01±0.05	0.146±0.007*	20.6±0.7	40±2	60±2
		P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
NCS DC73091	Soil	542±7	24.4±1.0	11.0±0.5	109±3	~0.003	(102)	1.06±0.05	13.6±0.5	0.165±0.006
NCS DC73092	Soil	(127)	29.8±1.2	11.7±0.3	180±3	~0.002	(94)	0.28±0.02	8.3±0.3	0.269±0.005
NCS DC73093	Soil	578±10	42.6±1.3	10.0±0.4	134±4	~0.001	184±11	2.3±0.1	21.7±1.0	0.34±0.03
NCS DC73094	Soil	720±30	34±1.1	11.8±0.4	141±3	~0.001	(107)	0.64±0.05	19.2±1.0	0.18±0.03
NCS DC73095	Soil	720±12	71±3	10.7±0.5	128±3	~0.001	(176)	1.86±0.11	21.9±0.7	0.28±0.03
NCS DC73096	Soil	176±9	42±3	4.4±0.3	43±2	~0.001	271±13	0.33±0.03	11.7±0.5	0.36±0.03
NCS DC73097	Soil	(319)	56±3	5.9±0.3	43.1±1.2	~0.003	247±12	1.20±0.07	13.9±0.7	0.53±0.03
NCS DC73098	Soil	938±13	36.7±1.0	10.5±0.3	131±5	~0.004	284±11	2.16±0.09	16.1±0.9	0.37±0.03

Section 4 Mineral & Geology(Powder)

		Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl
NCS DC73091	Soil	7.8±0.3	3.5±0.3	94±2	1.4±0.1	1.09±0.05	-0.046	15.7±0.9	0.539±0.010	0.64±0.04
NCS DC73092	Soil	6.2±0.3	2.9±0.3	(16)	1.5±0.3	0.62±0.03	0.032±0.007	27.6±1.6	0.445±0.013	1.12±0.05
NCS DC73093	Soil	6.5±0.3	5.1±0.5	37±2	1.6±0.3	0.93±0.04	0.11±0.03	22.8±1.2	0.556±0.010	1.09±0.05
NCS DC73094	Soil	8.9±0.3	4.8±0.3	196±4	1.6±0.1	1.38±0.06	(0.18)	17.6±1.0	0.505±0.011	0.81±0.03
NCS DC73095	Soil	6.9±0.3	6.2±0.5	58±4	2.6±0.3	1.06±0.07	0.10±0.03	26±2	1.05±0.17	1.18±0.05
NCS DC73096	Soil	2.8±0.1	5.6±0.3	(11.5)	2.7±0.3	0.33±0.03	0.045±0.007	16.7±0.9	0.424±0.020	0.47±0.03
NCS DC73097	Soil	3.8±0.2	4.1±0.3	(17)	1.4±0.1	0.49±0.03	(0.07)	(20)	0.465±0.080	0.44±0.03
NCS DC73098	Soil	7.6±0.3	7.1±0.3	51±3	1.66±0.09	1.08±0.05	0.048±0.007	17.7±1.3	0.655±0.012	0.83±0.05
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *
NCS DC73091	Soil	0.54±0.03	3.3±0.3	106±4	2.5±0.3	33.1±0.8	3.4±0.3	79±3	322±7	67.62±0.22
NCS DC73092	Soil	0.24±0.02	2.9±0.2	76±3	3.3±0.3	16.2±0.9	1.50±0.06	78±3	302±8	58.51±0.18
NCS DC73093	Soil	0.52±0.03	6.0±0.3	204±7	3.4±0.2	29.1±0.8	3.5±0.3	180±3	193±5	48.80±0.24
NCS DC73094	Soil	0.71±0.05	3.3±0.2	131±5	(2.7)	46±2	4.5±0.3	137±6	171±4	56.28±0.26
NCS DC73095	Soil	0.62±0.05	9.0±0.5	358±13	4.3±0.3	35.3±1.1	4.1±0.3	181±3	459±10	49.13±0.52
NCS DC73096	Soil	0.16±0.03	5.1±0.3	72±4	5.7±0.3	(9.8)	1.06±0.08	39±3	253±12	67.23±0.46
NCS DC73097	Soil	0.29±0.03	4.0±0.2	107±4	15.7±0.6	15±0.6	2.0±0.2	46±2	317±11	71.18±0.24
NCS DC73098	Soil	0.48±0.03	4.0±0.3	132±4	3.3±0.3	31.5±0.8	3.0±0.2	102±2	265±7	62.60±0.20
		Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	CaO*	MgO*	Na ₂ O*	K ₂ O*	TC*	Corg*
NCS DC73091	Soil	13.84±0.24	5.67±0.11	~0.65	1.37±0.03	1.21±0.05	0.85±0.03	2.19±0.03	0.48±0.03	0.34±0.03
NCS DC73092	Soil	22.66±0.17	5.46±0.09	~0.62	(0.06)	0.57±0.02	(0.09)	3.19±0.03	(0.25)	(0.23)
NCS DC73093	Soil	24.45±0.32	10.94±0.22	~0.46	(0.18)	1.19±0.03	(0.13)	1.65±0.03	(0.28)	(0.23)
NCS DC73094	Soil	22.48±0.26	6.75±0.09	~1.31	0.59±0.03	2.02±0.05	0.62±0.02	1.98±0.05	(0.2)	(0.15)
NCS DC73095	Soil	21.67±0.32	11.5±0.10	~0.91	0.46±0.03	1.55±0.03	(0.13)	1.49±0.03	0.78±0.05	(0.63)
NCS DC73096	Soil	18.03±0.26	4.67±0.16	~0.48	(0.1)	0.21±0.02	(0.06)	0.46±0.03	0.41±0.03	0.40±0.03
NCS DC73097	Soil	13.87±0.19	6.64±0.13	~0.54	(0.13)	0.29±0.02	(0.06)	0.82±0.03	(0.2)	(0.19)
NCS DC73098	Soil	15.79±0.24	6.44±0.09	~1.90	0.69±0.03	1.75±0.05	0.46±0.01	2.48±0.03	1.71±0.05	1.63±0.07
		LOI*								
NCS DC73091	Soil	~5.69								
NCS DC73092	Soil	~8.09								
NCS DC73093	Soil	~11.36								
NCS DC73094	Soil	~7.57								
NCS DC73095	Soil	~11.49								
NCS DC73096	Soil	~8.15								
NCS DC73097	Soil	~6.29								
NCS DC73098	Soil	~8.40								

Value with* is in percent.

Section 4 Mineral & Geology(Powder)

Number	Name	Composition(ug /g)								Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	
NCS DC73099	Soil	0.105±0.007	8.1±0.3	43±3	383±10	2.5±0.2	0.69±0.03	2.9±0.4	0.098±0.005	70
NCS DC73100	Soil	0.076±0.007	5.4±0.3	74±5	457±11	1.66±0.07	0.35±0.03	1.4±0.3	0.17±0.01	70
NCS DC73101	Soil	0.085±0.005	13.0±0.5	60±5	382±24	2.13±0.08	0.30±0.03	-0.75	0.21±0.01	70
NCS DC73102	Soil	-0.042	7.7±0.3	12.8±1.0	376±12	1.80±0.07	0.18±0.01	-1	0.042±0.005	70
NCS DC73103	Soil	0.098±0.007	13.9±0.5	59±3	184±10	3.0±0.2	1.5±0.2	2.4±0.4	0.055±0.009	70
NCS DC73104	Soil	-0.028	3.5±0.4	37±3	-47	-0.4	0.35±0.03	4.4±0.4	(-0.027)	70
		Ce	Cl	Co	Cr	Cs	Cu	Dy	Er	Eu
NCS DC73099	Soil	91±3	46±3	7±0.2	34±3	7.8±0.3	15.1±0.5	5.1±0.3	3.1±0.3	0.90±0.04
NCS DC73100	Soil	73±2	62±5	5.0±0.3	27±3	6.2±0.5	18.3±0.9	6.2±0.3	3.6±0.3	1.08±0.05
NCS DC73101	Soil	75±3	39±4	23.4±0.7	-75	7.3±0.4	40±2	5.8±0.3	3.3±0.2	1.50±0.03
NCS DC73102	Soil	74±3	46±4	13.4±0.5	-20	7.2±0.3	-8.9	8.0±0.3	4.6±0.3	1.60±0.05
NCS DC73103	Soil	79±4	-53	5.0±0.5	42±3	13.2±0.3	-8	5.1±0.5	-3.2	0.67±0.03
NCS DC73104	Soil	17.6±1.3	34±4	1.79±0.09	31±3	2.7±0.2	9.5±0.8	1.39±0.08	0.9±0.1	0.19±0.03
		F	Ga	Gd	Ge	Hf	Hg	Ho	I	In
NCS DC73099	Soil	362±20	16.0±0.8	5.2±0.3	1.39±0.07	15.5±1.4	0.099±0.005	1.03±0.05	4.1±0.3	0.069±0.005
NCS DC73100	Soil	254±9	11.2±0.7	5.8±0.3	1.59±0.09	14.7±1.0	0.038±0.003	1.26±0.06	0.56±0.05	0.048±0.003
NCS DC73101	Soil	466±24	18.4±0.7	6.1±0.3	1.6±0.3	7.8±0.5	0.055±0.006	1.17±0.07	1.75±0.09	0.069±0.003
NCS DC73102	Soil	218±14	21.0±0.6	7.7±0.3	1.52±0.04	-5.6	0.032±0.003	1.62±0.07	3.1±0.3	0.052±0.003
NCS DC73103	Soil	485±22	25.2±1.0	5.0±0.3	1.83±0.08	10.8±1.0	0.100±0.004	1.1±0.1	2.9±0.2	0.093±0.009
NCS DC73104	Soil	134±11	10.7±0.8	1.09±0.06	1.28±0.09	8.2±0.7	0.031±0.003	0.31±0.03	5.7±0.5	0.038±0.003
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni
NCS DC73099	Soil	42±2	27.7±0.9	0.53±0.03	387±8	0.92±0.05	506±20	21.8±0.9	32.5±1.2	10.7±0.6
NCS DC73100	Soil	38±3	14±0.5	0.59±0.03	311±10	0.38±0.03	960±34	17.2±1.0	31.6±0.9	7.9±0.5
NCS DC73101	Soil	38±3	37±3	0.52±0.03	0.123±0.002*	0.44±0.03	555±22	17.7±0.8	34.3±1.2	37.5±0.9
NCS DC73102	Soil	52±2	15.0±0.5	0.73±0.05	435±12	1.23±0.05	-114	11.7±0.7	40.9±1.4	12.5±0.6
NCS DC73103	Soil	46±3	45±3	-0.55	116±6	1.84±0.09	267±10	35±2	31±2	13.6±0.9
NCS DC73104	Soil	10.3±0.5	13.2±0.6	0.17±0.03	-62	1.17±0.08	198±17	13.2±0.7	6.6±0.5	14.9±0.9
		P	Pb	Pr	Rb	Re	S	Sb	Sc	Se
NCS DC73099	Soil	440±13	39.5±1.2	8.8±0.3	149±3	~0.002	120±7	0.42±0.03	7.9±0.3	0.19±0.01
NCS DC73100	Soil	375±10	22.9±1.1	8.5±0.3	94±3	~0.0002	158±5	0.70±0.08	5.6±0.3	0.10±0.01
NCS DC73101	Soil	-180	21.0±1.1	8.7±0.3	94±4	~0.003	174±7	1.3±0.1	15.6±0.7	0.21±0.02
NCS DC73102	Soil	-164	49±2	11.0±0.4	123±3	~0.003	119±5	0.25±0.03	12.2±0.4	0.221±0.005
NCS DC73103	Soil	177±10	46±3	8.7±0.7	135±4	~0.003	222±9	(0.87)	(9.1)	0.57±0.03
NCS DC73104	Soil	160±7	11.3±0.7	1.9±0.2	17.8±0.8	~0.001	107±7	(0.38)	(4.2)	(0.36)
		Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl
NCS DC73099	Soil	6.0±0.3	9.3±0.7	49±2	2.2±0.1	0.87±0.05	0.032±0.005	21.7±1.2	0.372±0.007	0.94±0.03
NCS DC73100	Soil	6.0±0.2	3.2±0.3	30±2	1.21±0.09	1.03±0.05	(0.029)	13.3±0.8	0.413±0.012	0.57±0.03
NCS DC73101	Soil	6.6±0.3	3.0±0.2	60±2	1.28±0.07	0.99±0.06	0.052±0.005	12.1±1.1	0.662±0.028	0.56±0.03
NCS DC73102	Soil	8.1±0.3	3.6±0.3	(10)	1.3±0.3	1.33±0.05	0.024±0.004	21.0±1.3	0.229±0.006	0.97±0.05
NCS DC73103	Soil	5.6±0.3	11.0±0.8	28.5±1.3	3.9±0.3	0.85±0.05	0.047±0.005	37±3	0.397±0.011	1.11±0.07
NCS DC73104	Soil	1.19±0.08	2.7±0.2	(18.7)	1.04±0.07	0.20±0.03	0.034±0.005	8.6±0.4	0.343±0.011	(0.13)
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO ₂ *
NCS DC73099	Soil	0.51±0.03	5.3±0.3	47±3	4.0±0.3	29±2	3.4±0.3	65±3	477±12	75.50±0.24
NCS DC73100	Soil	0.58±0.03	3.2±0.2	37±3	2.2±0.3	35±2	3.8±0.3	59±2	505±10	81.70±0.22
NCS DC73101	Soil	0.53±0.03	2.8±0.1	(127)	1.9±0.3	31.7±0.7	3.4±0.3	91±2	261±6	68.94±0.26
NCS DC73102	Soil	0.73±0.05	8.4±0.5	60±3	(0.84)	44.0±1.1	4.8±0.3	51±3	154±7	66.91±0.32
NCS DC73103	Soil	0.53±0.05	9.5±0.5	61±3	7.5±0.4	32±3	3.4±0.3	72±3	332±12	67.75±0.44
NCS DC73104	Soil	0.16±0.02	1.45±0.08	39±3	1.64±0.09	(9.9)	1.09±0.08	919.4)	278±9	88.45±0.26

Section 4 Mineral & Geology(Powder)

		Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	CaO*	MgO*	Na ₂ O*	K ₂ O*	TC*	Corg*	
NCS DC73099	Soil	11.86±0.20	2.99±0.07	~0.73	0.34±0.01	0.31±0.01	0.26±0.02	2.61±0.04	0.57±0.03	0.53±0.03	
NCS DC73100	Soil	7.77±0.14	2.54±0.03	~0.66	0.26±0.02	0.35±0.02	0.57±0.03	2.03±0.04	1.02±0.03	0.96±0.03	
NCS DC73101	Soil	14.25±0.22	6.46±0.09	~0.65	0.30±0.02	0.68±0.03	0.42±0.02	1.69±0.05	0.28±0.03	0.26±0.03	
NCS DC73102	Soil	18.65±0.28	4.37±0.09	~0.30	(0.04)	0.44±0.02	(0.08)	2.03±0.05	(0.11)	(0.11)	
NCS DC73103	Soil	17.99±0.24	3.82±0.09	~0.91	0.38±0.02	0.33±0.03	0.14±0.01	1.48±0.03	(0.24)	(0.23)	
NCS DC73104	Soil	6.16±0.14	1.58±0.05	~0.37	(0.15)	0.18±0.01	(0.08)	0.21±0.01	(0.17)	(0.15)	
LOI*											
NCS DC73099	Soil	~4.92									
NCS DC73100	Soil	~3.72									
NCS DC73101	Soil	~5.90									
NCS DC73102	Soil	~7.09									
NCS DC73103	Soil	~7.19									
NCS DC73104	Soil	~3.06									
Value with* is in percent.											
Number	Name	Composition(ug /g)									Unit Size
		TiO ₂ (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	FeO (%)	MgO (%)	CaO (%)	Na ₂ O (%)	(in g)	
NCS DC73523	Titanium ore	3.1±0.2	51.9±1.6	14.8±0.4	12.6±0.5	0.62±0.07	4.6±0.3	3.3±0.2	1.4±0.1	35	
NCS DC73524	Titanium ore	6.3±0.3	51.0±1.6	15.3±0.5	10.9±0.5	0.52±0.08	3.6±0.2	3.2±0.2	2.4±0.1	35	
NCS DC73525	Titanium ore	16.7±0.4	29.3±1.0	9.2±0.4	29.8±0.5	15.0±0.4	5.4±0.3	6.5±0.3	1.5±0.1	35	
NCS DC73526	Titanium concentrate	48.1±0.9	2.1±0.3	0.94±0.09	48.1±1.1	22.5±0.9	0.57±0.03	0.32±0.03	0.08±0.01	35	
		K ₂ O (%)	H ₂ O+ (%)	L.O.I (%)	As	Cd	Ce	Co	Cr	Cu	
NCS DC73523	Titanium ore	3.4±0.2	(3.1)	-3.8	1.8±0.2	0.06±0.01	103±7	37±3	474±35	46±5	
NCS DC73524	Titanium ore	2.9±0.2	(3)	-3.4	2.0±0.2	0.07±0.01	107±7	26±2	286±40	31±2	
NCS DC73525	Titanium ore	0.46±0.04	(1.8)	2.1±0.3	(2)	0.09±0.02	59±5	70±4	202±31	35±3	
NCS DC73526	Titanium concentrate	0.030±0.006	0.8±0.2	(0.7)		-0.05	143±12	50±5	397±60	18±3	
		Dy	Er	Eu	Ga	Gd	Ho	La	Lu	Mn	
NCS DC73523	Titanium ore	6.5±0.6	3.1±0.4	3.0±0.3	22±1	8.9±0.7	1.2±0.2	53±5	0.30±0.04	700±61	
NCS DC73524	Titanium ore	6.7±0.6	3.3±0.4	3.0±0.3	21±1	9.1±0.8	1.3±0.2	54±6	0.35±0.06	759±40	
NCS DC73525	Titanium ore	3.8±0.3	2.1±0.3	1.1±0.2	17±1	4.9±0.5	0.74±0.06	29±4	0.31±0.05	0.44±0.03*	
NCS DC73526	Titanium concentrate	7.0±0.8	4.1±0.8	0.6±0.1	11±2	10±2	1.3±0.3	68±8	0.60±0.13	1.1±0.1*	
		Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sc	
NCS DC73523	Titanium ore		55±6	182±10	0.25±0.02*	5.9±0.6	13±1	57±3	62±8	28±2	
NCS DC73524	Titanium ore		55±7	104±6	0.26±0.02*	6.7±0.9	14±2	48±3	55±9	24±2	
NCS DC73525	Titanium ore	195±29	28±3	51±3	0.10±0.02*	32±3	7.0±0.7	18±2	0.28±0.03*	36±5	
NCS DC73526	Titanium concentrate	-707	62±7	15±2	225±42	104±7	16±2	1.5±0.3	185±27	50±7	
		Sm	Sr	Ta	Tb	Th	Tm	U	V	W	
NCS DC73523	Titanium ore	10.0±1.5	237±11	(3.4)	1.3±0.2	6.0±0.9	0.45±0.05	0.7±0.1	202±21	(0.6)	
NCS DC73524	Titanium ore	10±2	298±13	8.7±1.5	1.3±0.2	7.6±1.1	0.50±0.06	(2.2)	264±48		
NCS DC73525	Titanium ore	5.3±0.4	412±14	(14)	0.7±0.1	30±4	0.35±0.06	1.8±0.3	690±51	(2.5)	
NCS DC73526	Titanium concentrate	11±1	21±2	(40)	1.3±0.2	99±14	0.6±0.1	4.7±0.7	723±79	(8)	
		Y	Yb	Zn	Zr						
NCS DC73523	Titanium ore	31±2	2.4±0.4	111±13	340±38						
NCS DC73524	Titanium ore	32±3	2.7±0.4	92±5	701±60						
NCS DC73525	Titanium ore	20±2	2.1±0.2	193±16	158±25						
NCS DC73526	Titanium concentrate	37±5	4.0±0.4	294±19	414±57						

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(Percent)											Unit Size (in g)	
		Al	Ca	Fe	K	Mg	N	Na	P	Si	Ti			
NCS DC 78302	Tibet Soil	7.11	2.59	3.34	2.12	1.53	0.128	1.52	0.86	30.57	0.40			15
Number	Name	Chemical Composition(μg/g)												
		As	Be	Cd	Co	Ce	Cr	Cu	Eu	La	Mn	Pb	Rb	
NCS DC 78302	Tibet Soil	3.8	2.96	0.081	13.1	83.6	60.8	24.6	1.4	41.9	677	14.2	135	
		Sc	Se	Sm	Sr	Th	U	V	Zn	Yb	Hf	Hg	Lu	
NCS DC 78302	Tibet Soil	10.8	0.16	7.1	163	17.5	3.84	77.5	58.0	3.1	(7.3)	(0.018)	(0.48)	
		Sb	Ta	Tb	Ba	Nd	Ni	Br	Cs	Dy				
NCS DC 78302	Tibet Soil	(0.4)	(1.1)	(0.9)	(509)	42.3	31.1	(1.3)	(7.3)	(5)				
Number	Name	Chemical Composition(Percent)											Unit Size (in g)	
		P ₂ O ₅	SiO ₂	CaO*	MgO	TFe ₂ O ₃	Al ₂ O ₃	MnO	TiO ₂	F	CO ₂	K ₂ O		Na ₂ O
NCS DC 79003	Phosphat Rock	6.06	38.80	19.42	7.12	3.08	4.06	0.026	0.48	0.51	16.41	2.63	0.14	100
* Including Sro														
		SrO												
NCS DC 79003	Phosphat Rock	0.055												
Number	Name	Chemical Composition(%)											Unit Size (in g)	
		Cu	Pb	Zn	SiO ₂	Al ₂ O ₃	Tfe	MgO	CaO	Na ₂ O	K ₂ O	Mn		S
NCS DC73507a	Ore	0.72	0.72	0.94	23.79	3.38	27.85	4.7	13.37	0.8	0.34	0.12	7.07	50
NCS DC73508a	Ore	1.94	5.97	3.3	57.8	7.03	6.18	0.23	1.27	0.63	2.83	0.42	5.67	50
NCS DC73509a	Ore	2.81	0.34	0.36	68.4	8.1	5.75	0.09	0.77	0.73	3.32	0.46	3.32	50
NCS DC73510a	Ore	0.081	4.85	13.73	9.61	2.09	20.71	0.71	7.91	0.033	0.64	0.056	30.8	50
NCS DC73511a	Ore	21.67	0.64	1.35	3.91	0.52	28.14	0.74	2.03	(0.06)	0.1	0.019	30.7	50
NCS DC73512a	Ore	0.62	52.25	7.45	3.98	0.86	8.19	0.22	0.93	(0.02)	0.23	0.009	20.3	50
NCS DC73513a	Ore	1.79	0.8	50.59	2.8	0.45	7.33	0.15	0.89	(0.02)	0.13	0.022	31.6	50
		TC	Ag	As	Bi	Cd	Ce	Ga	Ge	Hg	In	Mo	Sb	
NCS DC73507a	Ore	1.54	14.7	243	0.89	24.6	112	24.7	4.3	9.6	0.47	2.1	18.4	
NCS DC73508a	Ore	(0.1)	392	0.228*	0.164*	317	25.2	11.9	2.8	1.3	13.1	189	787	
NCS DC73509a	Ore	(0.06)	150	136	570	59.1	24.4	13.6	3.3	0.95	14.3	138	63.3	
NCS DC73510a	Ore	1.9	104	1244	9.4	357	12.7	69.2	31.5	120	0.8	3.3	111	
NCS DC73511a	Ore	(0.3)	45.5	253	8	39.4	19.5	8.8	2.8	11.1	5.8	18.3	32.8	
NCS DC73512a	Ore	2.23	467	793	25.2	175	(8.4)	17	7.5	69.1	0.24	4.2	728	
NCS DC73513a	Ore	0.33	126	363	1.1	1207	5	103	65.5	472	1.5	2.7	93.5	
		Se	Sn	Te	Tl	W	Re#							
NCS DC73507a	Ore	(1.8)	2	(0.2)	0.11	5	(1.6)							
NCS DC73508a	Ore	(17)	944	(5)	6.5	0.398*	(15)							
NCS DC73509a	Ore	(7)	991	(0.5)	4.4	1288	(68)							
NCS DC73510a	Ore	(0.7)	(10)	(0.2)	0.34	38.1	(7)							
NCS DC73511a	Ore	(15.5)	2.8	(2)	0.32	5.2	(4)							
NCS DC73512a	Ore	(4.6)	(3.6)	(2)	0.5	16.9	(16)							
NCS DC73513a	Ore	(1.4)	(4)	(0.3)	(0.2)	6.8	(7)							

Section 4 Mineral & Geology(Powder)

Chemical Composition(Percent)								
Number	Name	pH	Organic Matter (g/kg)	Total Nitrogen (g/kg)	Nitrogen as ammonium (mg/kg)	Hydrolyzable Nitrogen (mg/kg)	Available Phosphorus (mg/kg) NaHCO ₃ Extraction	Unit Size (in g)
NCS DC85101b	Available Nutrients in Soil	5.88	46.8	2.5	(183)	414		500
NCS DC85102b	Available Nutrients in Soil	8.01	19.8	1.26	(34)	138	148	500
NCS DC85103b	Available Nutrients in Soil	8.15	8.7	0.77	(19.7)	79	23	500
NCS DC85104b	Available Nutrients in Soil	7.43	5.8	0.50	(11.2)	41	22	500
NCS DC85105b	Available Nutrients in Soil	5.09	5.3	0.46	(19.0)	48		500
NCS DC85106b	Available Nutrients in Soil	6.53	3.7	0.26	(3)	21	(4)	500

Section 4 Mineral & Geology(Powder)

		Total (g/kg)	Conductivity (mS/cm)	Cl ⁻ (g/kg)	SO ₄ ²⁻ (g/kg)	Soluble salt HCO ₃ ⁻ (g/kg)	Ca ²⁺ (g/kg)	Mg ²⁺ (mg/kg)	K ⁺ (mg/kg)	Na ⁺ (mg/kg)
NCS DC85101b	Available Nutrients in Soil	1.2	(0.41)	(0.07)	0.25	(0.29)	0.14	25	55	126
NCS DC85102b	Available Nutrients in Soil	1.3	(0.36)	0.075	0.16	(0.54)	0.18	52	(75)	73
NCS DC85103b	Available Nutrients in Soil	0.96	(0.26)	(0.03)	0.091	(0.5)	0.17	10.2	(52)	70
NCS DC85104b	Available Nutrients in Soil	0.83	(0.28)		0.085	(0.54)	0.18	20	22	44
NCS DC85105b	Available Nutrients in Soil	0.33	(0.1)	(0.04)	0.067	(0.07)	0.014	2.7	16	61
NCS DC85106b	Available Nutrients in Soil	0.37	(0.12)	0.05	0.107	(0.072)	0.031	(1.1)	7.9	63
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Iron (mg/kg)	Available Manganese (mg/kg)	Available Cadmium (mg/kg)	Available Lead (mg/kg)	Available Nickel (mg/kg)	Available Cobalt (mg/kg)	
NCS DC85101b	Available Nutrients in Soil	10.3	5.7	480		0.33		0.78	(0.64)	
NCS DC85102b	Available Nutrients in Soil	21.3	18.9	203	109	0.073	4.9	0.66	(0.5)	
NCS DC85103b	Available Nutrients in Soil	4.4	2.1	(127)	70	0.06	3.5	0.66	(0.3)	
NCS DC85104b	Available Nutrients in Soil	1.5	(1.4)	(158)	56	0.026	2.3	(0.45)	(0.6)	
NCS DC85105b	Available Nutrients in Soil	(0.5)	1.6	(60)	8.4	(0.008)	1.5	0.25	0.16	
NCS DC85106b	Available Nutrients in Soil		0.53	16.9	1.3	(0.004)	4.2	(0.06)		
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Iron (mg/kg)	Available Manganese (mg/kg)	Available Cadmium (mg/kg)	Available Lead (mg/kg)	Available Nickel (mg/kg)	Available Chromium (mg/kg)	Available Arsenic (mg/kg)
NCS DC85101b	Available Nutrients in Soil	19.3	21.2	1.19*	118	0.58	11.9	2	1.5	(0.12)
NCS DC85102b	Available Nutrients in Soil									
NCS DC85103b	Available Nutrients in Soil									
NCS DC85104b	Available Nutrients in Soil	0.95	2.9		157	0.053	(0.23)	1.2	0.47	
NCS DC85105b	Available Nutrients in Soil	2.1	4.5	(220)	17	0.022	4.5	0.7	0.62	
NCS DC85106b	Available Nutrients in Soil	0.54#	2.2	125	6.6	0.014	10.1	0.28	0.65	
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Cadmium (mg/kg)	Available Nickel (mg/kg)	Available Chromium (mg/kg)	Exchangeable acidity (cmol/kg)	Hydrolyzable total acidity (cmol/kg)	Calcium carbonate (g/kg)	Free iron (g/kg)
NCS DC85101b	Available Nutrients in Soil	(0.23)	0.17	6.4	(0.06)	(0.04)	(0.9)	(7.8)		(24.6)
NCS DC85102b	Available Nutrients in Soil	(0.53)		0.28	(0.04)	(0.008)			(45.7)	(13.6)
NCS DC85103b	Available Nutrients in Soil	(0.08)		0.15					(72.2)	(14.2)
NCS DC85104b	Available Nutrients in Soil	(0.02)								(30.9)
NCS DC85105b	Available Nutrients in Soil	(0.02)	0.39	7.1	(0.15)	(0.007)	(4.12)	(8.8)		(48.2)
NCS DC85106b	Available Nutrients in Soil			(0.2)		(0.005)		(3.2)		(26.5)

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(Percent)						Unit Size (in g)
		pH	Organic Matter (g/kg)	Total Nitrogen (g/kg)	Nitrogen as ammonium (mg/kg)	Hydrolyzable Nitrogen (mg/kg)	Available Phosphorus (mg/kg) NaHCO ₃ Extraction	
NCS DC85113a	Available Nutrients in Soil	7.1	45.2	2.08	(127)	297	152	500
NCS DC85114a	Available Nutrients in Soil	8.37	17.9	1.12	(36)	103	34	500
NCS DC85115a	Available Nutrients in Soil	8.35	7.8	0.53	(6.8)	40	(12)	500
NCS DC85116a	Available Nutrients in Soil	8.8	3.7	0.29	(4.7)	22	9.8	500
		Effective Potassium (g/kg)	Slowly available Potassium (Inexchangeable) (g/kg)	Available sulfur (mg/kg)		Available Silicon (g/kg)	Cation Exchange Capacity(B) cmol(+)/kg	
				Phosphate Extraction	NaHCO ₃ Extraction			
NCS DC85113a	Available Nutrients in Soil	0.57	0.96	64		0.86	29.6	
NCS DC85114a	Available Nutrients in Soil	1.05	1.27		2.4*	0.49	17.7	
NCS DC85115a	Available Nutrients in Soil	0.41	1.16		24	0.55	13.7	
NCS DC85116a	Available Nutrients in Soil	0.3	0.92		25	0.42	8.9	
		Cation Exchange Capacity(E) cmol(+)/kg		Exchangeable Calcium(B) cmol(1/2Ca ⁺) /kg	Exchangeable Calcium(E) cmol(1/2Ca ⁺) /kg	Exchangeable Magnesium(B) cmol(1/2Mg ⁺) /kg	Exchangeable Magnesium(E) cmol(1/2Mg ⁺) /kg	
NCS DC85113a	Available Nutrients in Soil	30.8		24.5	25.7	4.9	4.7	
NCS DC85114a	Available Nutrients in Soil	17		(3)		(6)		
NCS DC85115a	Available Nutrients in Soil	13.5		9.4		1.09		
NCS DC85116a	Available Nutrients in Soil	8.4		6.8		1.21		
		Exchangeable Sodium(B) cmol(Na ⁺)/kg		Exchangeable Sodium(E) cmol(Na ⁺)/kg	Exchangeable Potassium(B) cmol(K ⁺)/kg	Exchangeable Potassium(E) cmol(K ⁺)/kg	Exchangeable Manganese (mg/kg)	
NCS DC85113a	Available Nutrients in Soil	0.81		0.73	1.52	1.5	165	
NCS DC85114a	Available Nutrients in Soil	(7.9)			2		33	
NCS DC85115a	Available Nutrients in Soil				0.59		11	
NCS DC85116a	Available Nutrients in Soil				0.66		5.9	
		Easy reduced Manganese (mg/kg)		Available Molybdenum (mg/kg)	Available Boron (mg/kg)	Available Selenium (mg/kg)	Soluble Fluorine (mg/kg)	
NCS DC85113a	Available Nutrients in Soil			0.22	0.68	(0.063)	7.3	
NCS DC85114a	Available Nutrients in Soil			0.47	9.7	(0.128)	12.6	
NCS DC85115a	Available Nutrients in Soil	(90)		0.08	0.43		6.6	
NCS DC85116a	Available Nutrients in Soil	(60)		0.1	0.47	(0.014)	8.5	

Section 4 Mineral & Geology(Powder)

		Total (g/kg)	Conductivity (mS/cm)	Cl ⁻ (g/kg)	SO ₄ ²⁻ (g/kg)	Soluble salt HCO ₃ ⁻ (g/kg)	Ca ²⁺ (g/kg)	Mg ²⁺ (mg/kg)	K ⁺ (mg/kg)	Na ⁺ (mg/kg)
NCS DC85113a	Available Nutrients in Soil	1.2	(0.4)	(0.09)	0.183	(0.45)	0.2	40	65	111
NCS DC85114a	Available Nutrients in Soil	11.4	(3.2)	1	7.2	(0.45)	0.89	302	262	2.39*
NCS DC85115a	Available Nutrients in Soil	0.85	(0.2)	(0.02)	0.065	(0.5)	0.16	10		44
NCS DC85116a	Available Nutrients in Soil	0.75	(0.18)		0.09	(0.37)	(0.1)	(11)	31	62
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Iron (mg/kg)	Available Manganese (mg/kg)	DTPA extraction Cadmium (mg/kg)	Available Lead (mg/kg)	Available Nickel (mg/kg)	Available Cobalt (mg/kg)	
NCS DC85113a	Available Nutrients in Soil	5	4.2	232	234	0.075		1.4	(1.2)	
NCS DC85114a	Available Nutrients in Soil	6.5	2.9	(170)	85	0.029	4.7	0.8	(0.5)	
NCS DC85115a	Available Nutrients in Soil	2.1	0.88	(116)	31	0.02	1.2	0.5	(0.3)	
NCS DC85116a	Available Nutrients in Soil	1.2	(0.7)	(90)	11.2	0.009	1.4	0.24	(0.15)	
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Iron (mg/kg)	Available Manganese (mg/kg)	Available Cadmium (mg/kg)	Available Lead (mg/kg)	Available Nickel (mg/kg)	Available Chromium (mg/kg)	Available Arsenic (mg/kg)
NCS DC85113a	Available Nutrients in Soil	(1.8)	8	339	377	0.093	1.2	3.2	0.63	
NCS DC85114a	Available Nutrients in Soil									
NCS DC85115a	Available Nutrients in Soil									
NCS DC85116a	Available Nutrients in Soil									
		Available Copper (mg/kg)	Available Zinc (mg/kg)	Available Cadmium (mg/kg)	Available Nickel (mg/kg)	Available Chromium (mg/kg)	Exchangeable acidity (cmol/kg)	Hydrolyzable total acidity (cmol/kg)	Calcium carbonate (g/kg)	Free iron (g/kg)
NCS DC85113a	Available Nutrients in Soil	0.079		0.22	(0.04)	(0.006)		(2.8)		(15.5)
NCS DC85114a	Available Nutrients in Soil	(0.17)							(123)	(10.3)
NCS DC85115a	Available Nutrients in Soil	(0.037)							(56.2)	(16.7)
NCS DC85116a	Available Nutrients in Soil	0.027							(95.1)	(11.7)

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size (in g)																					
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	MNO	P ₂ O ₅	S	L.O.L	Cu*																						
NCS DC 85107	Agriculture soil	65.37	15.06	4.98	1.62	1.68	2.48	2.72	0.74	0.094	0.120	(0.013)	4.83	24	70																					
NCS DC 85108	Agriculture soil	63.06	12.76	4.49	2.01	4.57	1.69	2.43	0.68	0.077	0.162	(0.017)	7.71	25	70																					
NCS DC 85109	Agriculture soil	53.72	14.74	5.72	2.09	7.93	0.99	2.72	0.65	0.106	0.197	(0.019)	11.17	29	70																					
NCS DC 85110	Agriculture soil	61.03	16.21	6.20	1.90	0.84	0.99	2.45	0.92	0.050	0.098	(0.033)	9.01	42	70																					
NCS DC 85111	Agriculture soil	69.68	14.58	5.21	0.54	(0.22)	(0.090)	1.08	0.96	0.029	0.122	(0.014)	7.52	32	70																					
NCS DC 85112	Agriculture soil	83.34	8.89	1.35	(0.20)	(0.16)	(0.038)	0.65	0.22	0.015	0.124	(0.014)	4.86	2.8	70																					
		Zn*	B*	Mo*																																
NCS DC 85107	Agriculture soil	67	34	0.80																																
NCS DC 85108	Agriculture soil	68	54	(0.82)																																
NCS DC 85109	Agriculture soil	96	75	1.53																																
NCS DC 85110	Agriculture soil	93	65	0.73																																
NCS DC 85111	Agriculture soil	81	71	1.47																																
NCS DC 85112	Agriculture soil	22	(20)	1.15																																
Number	Name	Chemical Composition(Percent)													Unit Size (in g)																					
		BeO	Li ₂ O	Rb ₂ O	Cs ₂ O	TA ₂ O ₅	Nb ₂ O ₅	ZrO ₂	HfO ₂	SiO ₂	Al ₂ O ₃	TFeO ₃	FeO	CaO																						
NCS DC 86301	Beryllium Ore	0.060								73.80	14.85	0.515	(0.17)	0.577	50																					
NCS DC 86302	Beryllium Ore	0.359								73.77	14.83	0.591	(0.18)	0.578	50																					
NCS DC 86303	Lithium Ore	0.017	0.459	0.145	0.036	48.4*	26.5*			74.21	14.79	0.391	(0.06)	0.335	50																					
NCS DC 86304	Lithium Ore	0.026	2.28	0.734	0.178	0.011	60.7*			64.70	19.23	0.299	(0.02)	0.076	50																					
NCS DC 86305	Tantalium Ore	0.033	0.791	0.245	0.064	87.3*	42.1			75.03	14.32	0.322	(0.02)	0.107	50																					
NCS DC 86307	Zirconium Ore							0.187	42.9*	65.36	14.75	4.78	1.83	2.69	50																					
NCS DC 86308	Zirconium Ore							1.27	0.026	65.56	14.76	4.67	1.83	2.64	50																					
NCS DC 86310	Rare-Earth Ore		0.015	0.069	17.9*					74.61	14.72	1.16	0.053	0.03	50																					
		RE ₂ O ₃	La ₂ O ₃	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O*	L.O.I																								
NCS DC 86301	Beryllium Ore	75.8*	6.97*	0.070	0.029	0.015	4.08	4.79	(0.01)	0.019	0.607	0.687																								
NCS DC 86302	Beryllium Ore		7.74	0.069	0.035	0.015	3.87	4.66	0.013	0.040	0.596	0.732																								
NCS DC 86303	Lithium Ore	47.1*	5.03*	0.054	0.069	0.018	3.16	4.19	0.169	0.676	1.06	1.49																								
NCS DC 86304	Lithium Ore	15.2*	(2.1)*	0.036	0.252	0.028	4.79	2.34	0.236	3.16	2.34	4.11																								
NCS DC 86305	Tantalium Ore	18.3*	3.09*	0.050	0.113	0.028	2.05	3.62	0.350	1.34	1.50	2.20																								
NCS DC 86307	Zirconium Ore	0.018	36.3*	2.08	0.082	0.420	3.35	3.80	0.166	0.081	1.34	1.57																								
NCS DC 86308	Zirconium Ore	0.022	38.0*	2.01	0.083	0.411	3.33	3.72	0.169	0.083	1.3	1.51																								
NCS DC 86310	Rare-Earth Ore	0.086	19.9*	0.080	0.016	0.022	4.94	0.157	(0.003)	0.034	3.61	3.70																								
*Cherical Composition(10 ⁻⁶)		Chemical Composition(μg/g)																																		
		CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	HO ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	Yb ₂ O ₃	La ₂ O ₃																						
NCS DC 86301	Beryllium Ore	14.7	1.70	6.68	2.53	0.14	3.64	0.75	4.53	0.85	2.16	0.33	2.27	0.32																						
NCS DC 86302	Beryllium Ore	15.2	1.91	7.52	2.73	0.14	3.84	0.80	4.63	0.91	2.20	0.36	2.37	0.38																						
NCS DC 86303	Lithium Ore	8.98	1.30	4.96	1.60	(0.14)	2.09	0.42	2.47	0.43	1.16	0.18	1.28	0.18																						
NCS DC 86304	Lithium Ore	2.56	0.61	2.56	0.63	0.13	0.72	0.13	0.63	(0.12)	0.27	0.039	0.23	0.030																						
NCS DC 86305	Tantalium Ore	3.63	0.82	3.27	0.75	0.16	0.83	0.14	0.65	0.12	0.28	0.041	0.23	0.031																						
NCS DC 86307	Zirconium Ore	71.9	7.87	27.2	4.70	1.22	3.40	0.53	2.89	0.58	1.78	0.30	2.16	0.37																						
NCS DC 86308	Zirconium Ore	75.9	7.91	27.0	4.93	1.22	(4.1)	0.76	4.71	1.36	4.82	0.94	7.74	1.54																						
NCS DC 86310	Rare-Earth Ore	21.9	6.32	27.9	15.3	0.37	32.9	8.03	56.9	12.1	36.6	5.60	36.0	5.67																						
		Y ₂ O ₃	Sc ₂ O ₃	W	Mo	Sn	Th																													
NCS DC 86301	Beryllium Ore	29.2	1.66	1.30	0.41																															
NCS DC 86302	Beryllium Ore	28.5	3.4	5.46	1.25																															
NCS DC 86303	Lithium Ore	17.0	0.98	8.87	(32)																															
NCS DC 86304	Lithium Ore	3.51	0.44	43.7	95.4																															
NCS DC 86305	Tantalium Ore	3.76	0.63	16.4	(52)																															
NCS DC 86307	Zirconium Ore	19.5	14.1																																	
NCS DC 86308	Zirconium Ore	42.7	14.5																																	
NCS DC 86310	Rare-Earth Ore	0.057*	9.26																																	
*Chemical Composition Percent																																				

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃ (T)	FeO	CaO	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O ⁺	
NCS DC 86313	Beryllium Ore	71.97	15.55	0.47	0.15	0.52	0.083	0.020	0.010	3.28	3.63	(0.018)	0.0088	(0.63)	70
NCS DC 86315	Tantalum Ore	72.34	14.58	0.68	0.26	0.71	0.093	0.45	0.039	4.11	4.40	(0.040)	0.019	0.56	70
NCS DC 86316	Zirconium Ore	70.73	(14.57)	0.38	0.10	0.63	0.079	0.021	0.64	3.90	4.20	0.040	0.027	0.49	70
L.O.I															
NCS DC 86313	Beryllium Ore	0.86													
NCS DC 86315	Tantalum Ore	0.61													
NCS DC 86316	Zirconium Ore	0.56													
Chemical Composition(µg/g)															
		Σ RE ₂ O ₃	La ₂ O ₃	CeO ₂	Pr ₂ O ₃	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	
NCS DC 86313	Beryllium Ore	63.6	6.08	13.1	1.58	5.96	1.99	0.11	2.83	0.57	3.62	0.67	1.95	0.29	
NCS DC 86315	Tantalum Ore	81.0	7.65	16.5	1.91	7.84	2.48	0.13	3.47	0.72	4.72	0.88	2.65	0.38	
NCS DC 86316	Zirconium Ore	515	69.2	146	15.7	53.4	10.1	0.55	9.92	2.02	14.9	3.66	16.4	2.84	
Yb ₂ O ₃ Lu ₂ O ₃ Y ₂ O ₃ Sc ₂ O ₃ Mo BeO Lu ₂ O ₃ Y ₂ O ₃ Sc ₂ O ₃ W Rb ₂ O BeO Li ₂ O															
NCS DC 86313	Beryllium Ore	1.88	0.25	23.0	1.91	3.37	3.02*								
NCS DC 86315	Tantalum Ore	2.37						0.37	29.9	21.4	2.14	244	12.5	106	
NCS DC 86316	Zirconium Ore	25.9													
Cs ₂ O Nb ₂ O ₅ Ta ₂ O ₅ Sn Lu ₂ O ₃ Y ₂ O ₃ Sc ₂ O ₃ W ZrO ₂ Th HfO ₂															
NCS DC 86355	Tantalum Ore	8.14	0.52*	1.02*	(2.65)										
NCS DC 86316	Zirconium Ore					6.11	142	10.7	5.01	4.68*	202	0.084*			

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Number	Name	Chemical Composition(%)														Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃ (T)	FeO	CaO	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O ⁺		
NCS DC 86318	Rare Earth Ore	66.9	(14.26)	2.24	0.20	0.29	(0.11)	0.052	0.17	5.52	0.66	(0.020)	0.017	3.60	70	
NCS DC 86318	Rare Earth Ore	L.O.I	Σ RE ₂ O ₃	La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃		
		5.43	4.30	0.23	0.053	0.089	0.40	0.20	21.9*	0.25	0.055	0.37	(0.064)	0.20		
		Tm ₂ O ₃	Yb ₂ O ₃	Lu ₂ O ₃	Y ₂ O ₃	Sc ₂ O ₃	Cs ₂ O	Rb ₂ O	Th	Li ₂ O						
NCS DC 86318	Rare Earth Ore	0.031	0.21	0.030	2.16	7.2*	12.6*	404*	67.0*	121*						
*Chemical Composition µg/g																
Number	Name	Chemical Composition(%)														Unit Size (in g)
		Al ₂ O ₃	CaO	CO ₂	K ₂ O	LOI	MgO	MnO	Na ₂ O	P ₂ O ₅	S	SiO ₂	TF ₂ O ₃	TiO ₂	Cr ₂ O ₃	
NCS DC87111	Magnesite	0.073	0.76	45.84	0.0052	51.04	47.16	0.013	0.011	0.013	0.0024	0.35	0.19	0.0024	80	
NCS DC87112	Magnesite	0.83	0.44	42.4	0.0048	47.15	45.61	0.015	0.025	0.019	0.0023	5.15	0.65	0.021	80	
NCS DC87113	Magnesite	1.71	2.51	39.96	0.0098	45.76	43.64	0.016	0.02	0.023	0.0034	5.45	0.71	0.053	80	
NCS DC87114	Magnesite	0.35	1.99	44.97	0.012	49.81	44.24	0.05	0.013	0.025	0.0031	1.71	1.79	0.01	80	
NCS DC87116	Serpentine	0.13	0.62	7.29	0.015	19.07	43.09	0.012	0.0067	0.013	0.015	36.45	0.44	0.005	0.001 80	
NCS DC87117	Serpentine	0.49	0.35	1.34	0.0052	14.04	40.17	0.09	0.0039	0.0054	0.042	37.49	7.16	0.013	0.35 80	
NCS DC87118	Serpentine	0.46	19.46	15.15	0.009	24.05	23.73	0.075	0.0061	0.0095	0.006	25.38	5.83	0.018	0.27 80	
NCS DC87119	Serpentine	0.91	0.49	0.75	0.13	12.67	39.87	0.098	0.03	0.006	0.043	38.4	7.09	0.019	0.34 80	
NCS DC87120	Serpentine	13.84	6.41	0.81	0.34	10.98	27.38	0.23	0.0081	0.0055	0.024	35.4	4.72	0.032	0.33 80	
(µg/g)																
		As	Ba	Ce	Co	Cr	Cu	La	Li	Ni	Pb	Sc	Sr	Th	U	
NCS DC87111	Magnesite	0.41	1.4	1.6	0.53	2.12	0.81	0.66	2.21	2.14	0.79	0.99	3.49	0.047	2	
NCS DC87112	Magnesite	0.4	2.99	7.77	0.69	10.2	0.77	3.23	2.16	8.31	1.14	3.23	5.06	0.85	0.029	
NCS DC87113	Magnesite	0.25	5.68	8.54	1.7	13.4	0.99	3.33	11.2	9.23	1.35	3.09	30.1	1.95	7.72	
NCS DC87114	Magnesite	0.68	9.99	1.67	3.14	4.16	16.4	0.57	12.8	12.1	1.05	1.58	10.6	0.2	0.28	
NCS DC87116	Serpentine	56.8	5.25	1.73	0.5		1.74	0.88	7.9	1.98	1.28	1.22	8.16	0.1	2	
NCS DC87117	Serpentine	1.4	2.54	0.98	102		2.23	0.51	5.04	2276	4.94	6.45	11	0.067	0.029	
NCS DC87118	Serpentine	9.04	17.7	1.23	81.3		3.6	1.38	4.53	1937	206	4.98	40.2	0.051	7.72	
NCS DC87119	Serpentine	0.64	88.2	2.08	101		3.66	1.31	3.82	2174	3.76	7.85	14.9	0.75	0.28	
NCS DC87120	Serpentine	7.07	177	0.55	57.5		35.7	0.24	163	1057	1.79	5.14	62.8	0.042	0.038	
(µg/g)																
		U	V	Y	Zn											
NCS DC87111	Magnesite	0.41	0.96	1.25	1.94											
NCS DC87112	Magnesite	0.33	4.09	6.68	2.41											
NCS DC87113	Magnesite	0.25	7.26	3.32	2.64											
NCS DC87114	Magnesite	0.96	1.63	3.25	2.55											
NCS DC87116	Serpentine		3.92	0.7	4.03											
NCS DC87117	Serpentine		32.2	0.26	58.2											
NCS DC87118	Serpentine		32.9	2.51	57.6											
NCS DC87119	Serpentine		40.9	0.68	44.5											
NCS DC87120	Serpentine		32.9	0.87	33.4											

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Number	Name	Certified value			Chemical Composition(µg/g)							Unit Size (in g)		
NCS DC 90001	Ag in Silver ore	46.9										50		
NCS DC 90002	Ag in Silver ore	112										50		
NCS DC 90003	Ag in Silver ore	298										50		
NCS DC 90004	Ag in Silver ore	446										50		
NCS DC 90005	Ag in Silver ore	559										50		
NCS DC 90006	Ag in Silver ore	732										50		
Number	Name	F	Al	Na	SiO ₂	Chemical Composition(Percent)					Unit Size (in g)			
NCS DC 91001	Cryolite	55.45	17.34	21.75	0.087	Fe ₂ O ₃	SO ₄ ²⁻	P ₂ O ₅	CaO	L.O.I	100			
NCS DC 91002	Cryolite	54.66	15.18	26.32	0.211	0.032	0.199	0.025	(0.597)	2.97	100			
NCS DC 91003	Cryolite	53.89	13.65	29.29	0.363	0.036	0.205	0.013	(0.719)	2.25	100			
NCS DC 91004	Cryolite	53.2	13.16	30.26	0.389	0.033	0.293	0.037	(0.508)	2.12	100			
NCS DC 91005	Cryolite	52.14	12.69	32.01	0.485	0.0098	0.45	0.065	(0.0062)	1.4	100			
NCS DC 91006	Cryolite	51.21	11.75	33.24	0.238	0.04	0.683	0.051	0.112	1.6	100			
Number	Name	F	Al	Na	SiO ₂	Chemical Composition(Percent)					Unit Size (in g)			
NCS DC 91007	Alaminum fluoride	60.76	30.27	0.104	0.146	FeO	SO	PO	L.O.I		100			
NCS DC 91008	Alaminum fluoride	61.79	30.7	0.097	0.104	0.132	0.585	0.0253	4.61		100			
NCS DC 91009	Alaminum fluoride	57.79	34.68	0.113	0.015	0.028	0.093	0.0008	0.662		100			
NCS DC 91010	Alaminum fluoride	60.96	30.52	0.125	0.251	0.126	0.748	0.0265	5.48		100			
NCS DC 91011	Alaminum fluoride	61.51	32.28	0.121	0.429	0.021	0.627	0.1317	0.754		100			
NCS DC 91012	Alaminum fluoride	59.74	33.93	0.126	0.016	0.037	0.136	0.0027	0.547		100			
NCS DC 91013	Alaminum fluoride	60.88	33.12	0.315	0.017	0.02	0.098	0.0013	0.467		100			
NCS DC 91014	Alaminum fluoride	57.72	34.76	0.113	0.014	0.015	0.104	0.0007	0.64		100			
NCS DC 91015	Alaminum fluoride	59.99	30.7	0.111	0.301	0.107	0.702	0.0247	5.61		100			
NCS DC 91016	Alaminum fluoride	64.97	31.92	0.028	0.196	0.025	0.076	0.0275	1.25		100			
Number	Name	Au(ng/g)				Chemical Composition							Unit Size (in g)	
NCS DC 93003	Gold Ore	3.4											500	
NCS DC 93004	Gold Ore	52											500	
Number	Name	TFe	FeO	SiO ₂	Al ₂ O ₃	Chemical Composition(Percent)								Unit Size (in g)
NCS DC 93023	Magnetite	61.34	29.68	12.36	0.45	CaO	MgO	Mn	TiO ₂	P	S	Na ₂ O	K ₂ O	100
NCS DC 93024	Magnetite	68.02	30.50	4.58	0.34	0.35	0.19	0.017	0.056	0.017	0.301	0.012	0.018	100
NCS DC 93025	Magnetite	64.17	31.34	9.43	0.29	0.56	0.49	0.032	0.049	0.033	0.624	0.011	0.012	100
Number	Name	SiC	Fe ₂ O ₃	F.C.	F.Si	Chemical Composition(Percent)				Unit Size (in g)				
NCS DC 93026	Silicon Carbide	84.09	0.86	1.71	1.45	SiO ₂	Al ₂ O ₃	CaO	MgO					50
NCS DC 93027	Silicon Carbide	90.86	1.12	3.48	0.24	2	0.77	0.47	0.039					50
NCS DC 93028	Silicon Carbide	97.87	0.39	0.48	0.18	0.55	0.1	0.055	0.008					50
Number	Name	Ni	Fe	SiO ₂	Al ₂ O ₃	Chemical Composition(Percent)						Unit Size (in g)		
NCS DC 93030	Nickel iron ore	1.71	15.04	36.98	1.57	CaO	MgO	Mn	Cr	S	P			50
Number	Name	Si	Fe	Si _F	Al	Chemical Composition(Percent)				Unit Size (in g)				
NCS DC93031	Silicon Nitride	59.16	0.48	1.04	0.23	Ca	N	Si ₃ N ₄						50
Number	Name	TFe	FeO	SiO ₂	Al ₂ O ₃	Chemical Composition(Percent)							Unit Size (in g)	
NCS DC93032	Titanium concentrate	34.26	37.08	2.08	0.64	CaO	MgO	MnO	TiO ₂	S	P	V ₂ O ₅		100
NCS DC93033	Titanium concentrate	31.11	35.76	4.03	1.08	1.17	5.36	0.698	45.96	0.201	0.0032	0.075		100
NCS DC93034	Iron Ore	52.84	33.14	4	4.29	1.04	3.17	0.356	12.78	0.786	0.002	0.561		100

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Number	Name	Chemical Composition(µg/g)										Unit Size (in g)
		SiO ₂	Fe ₂ O ₃	Al ₂ O ₃	TiO ₂	CaO	MgO	TS	Na ₂ O	K ₂ O	MnO	
NCS DC 91017	Bauxite	3.16	2.01	71.14	3.04	0.75	0.090	0.031	0.022	0.477	0.0036	50
NCS DC 91018	Bauxite	8.02	6.06	64.53	2.59	0.26	0.246	0.040	0.030	0.22	0.012	50
NCS DC 91019	Bauxite	6.31	16.11	57.15	2.65	0.089	0.235	0.033	0.031	1.00	0.021	50
		P ₂ O ₅	Ga ₂ O ₃	ZnO								
NCS DC 91017	Bauxite	0.221	0.0114	0.0018								
NCS DC 91018	Bauxite	0.185	0.0106	0.0040								
NCS DC 91019	Bauxite	0.077	0.0088	0.0036								
Number	Name	Chemical Composition(µg/g)										Unit Size (in g)
		SiO ₂	Fe ₂ O ₃	Na ₂ O	K ₂ O	TiO ₂	V ₂ O ₅	P ₂ O ₅	ZnO	Li ₂ O	CaO	
NCS DC 91020	Aluminium Hydroxide	0.0089	0.0047	0.19	0.0004	0.0013	0.00013	0.00009	0.00044	0.0002	0.0069	50
NCS DC 91021	Aluminium Hydroxide	0.02	0.0035	0.34	0.017	(0.00008)	0.00013	0.00015	0.00042	0.011	0.015	50
NCS DC 91022	Aluminium Hydroxide	0.112	0.0062	1.4	0.1	0.00054	0.00027	0.00029	0.00026	0.0027	0.017	50
NCS DC 91023	Aluminium Hydroxide	0.037	0.0037	0.55	0.03	0.0011	0.00017	0.0002	0.00041	0.0012	0.009	50
NCS DC 91024	Aluminium Hydroxide	0.083	0.0033	0.68	0.038	0.00014	0.00021	0.00028	0.00031	0.0079	0.017	50
		MgO	Cr ₂ O ₃	L.O.I	CuO							
NCS DC 91020	Aluminium Hydroxide	0.0014	(0.0001)	34.26	(<0.0001)							
NCS DC 91021	Aluminium Hydroxide	0.0012	(0.0001)	34.26								
NCS DC 91022	Aluminium Hydroxide	0.0048	(0.0001)	33.7								
NCS DC 91023	Aluminium Hydroxide	0.0019	(0.0001)	34.23								
NCS DC 91024	Aluminium Hydroxide	0.0023	(0.0001)	34.14								
Number	Name	Chemical Composition(µg/g)										Unit Size (in g)
		SiO ₂	Fe ₂ O ₃	Na ₂ O	K ₂ O	TiO ₂	CaO	ZnO	Li ₂ O	MgO	V ₂ O ₅	
NCS DC 91025	Alumina	0.044	0.022	0.27	0.014	0.0027	0.022	0.0049	0.048	0.009	0.00034	50
NCS DC 91026	Alumina	0.025	0.0044	0.43	0.019	0.00019	0.016	0.0005	0.016	0.0024	0.00097	50
NCS DC 91027	Alumina	0.034	0.0087	0.18	0.0026	0.0035	0.02	0.00027	0.0089	0.0018	0.0019	50
NCS DC 91028	Alumina	0.047	0.0094	0.31	0.0056	0.0042	0.021	-0.00013	0.01	0.0012	0.0034	50
NCS DC 91029	Alumina	0.041	0.014	0.22	0.0077	0.0033	0.023	0.0026	0.027	0.006	0.00095	50
		P ₂ O ₅	Cr ₂ O ₃	L.O.I	CuO							
NCS DC 91025	Alumina	0.00052	(0.0002)	0.49	(0.0002)							
NCS DC 91026	Alumina	0.00022	(0.0003)	1	(<0.0001)							
NCS DC 91027	Alumina	0.00095	(0.0002)	0.042								
NCS DC 91028	Alumina	0.00098	(0.0002)	0.16								
NCS DC 91029	Alumina	0.00076	(0.0002)	0.29								
Number	Name	Chemical Composition(µg/g)										Unit Size (in g)
		Mo	SiO ₂	CaO	Cu	Fe ₂ O ₃	MgO	Mn	Pb	W	Zn	
NCS DC93010a	Molybdenum Concentrate	55.54	2.56	0.95	0.06	1.44	0.47	0.033	0.044	0.12	0.014	50
		Al ₂ O ₃	C	Bi	P	Re	Total oil and water					
NCS DC93010a	Molybdenum Concentrate	0.23	0.34	0.0052	0.0055	0.0026	(0.34)					

Section 5 Slag, Refractory(Powder)

Number	Name	SiO ₂	MnO	P ₂ O ₅	S	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	Al ₂ O ₃	TFe	F	Cr ₂ O ₃	Unit Size (in g)
NCS HC 11801	Blast Furnace Slag	34.31	0.34	0.012	0.97	1.52	39.02	8.12	0.47	0.41	13.83	0.411	(0.062)		60
NCS HC 11802	Blast Furnace Slag	32.25	0.51	0.0074	0.95	0.706	40.07	9.17	0.43	0.47	14.46	0.262	(0.14)		60
NCS HC 11803	Electric Furnace Slag	53.43	0.35	0.006	0.034	0.079	5.55	28.96	0.19	0.2	3.15	5.75	(0.033)	0.77	60
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	TiO ₂	MgO	TCa	P ₂ O ₅	F	CaF			Unit Size (in g)
NCS HC 13804	Converter Slag	13.38	14.91	1.78	1.86	12.33	0.42	9.28	37.64	1.02		1.41			50
NCS HC 13805	Open Hearth Slag	34.33	8.91	3.92	2.01	36.55	0.32	21.15		0.87					50
NCS HC 13806	Electric Furnace Slag	13.11	21.35	4.00	13.16	15.25	0.18	15.18	16.22	0.125	0.17				50
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	P					Unit Size (in g)
NCS HC 14807	Mullite	51.43	43.62	1.14	0.23	0.21	1.62	0.46	0.65	0.062					60
NCS HC 14808	Mullite	37.41	57.47	0.46	0.15	0.14	1.69	0.46	1.45	0.022					60
NCS HC 14809	Mullite	21.81	72.39	0.93	0.19	0.42	0.24	0.16	3.64	0.043					60
Number	Name	C	SiO ₂	Mn	P	S	Fe								Unit Size (in g)
NCS HC 15804	Manganese-rich slag	0.014	25.16	44.42	0.0032	0.32	0.22								100
Number	Name	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P ₂ O ₅	S	TCa				Unit Size (in g)
NCS HC 18806	Blast Furnace Slag	0.60	32.75	14.11	38.84	8.46	0.30	2.63	0.008	1.13					100
NCS HC 18807	Blast Furnace Slag	1.10	33.04	16.48	35.77	8.77	0.74	0.73	0.009	0.90					100
NCS HC 18808	Converter slag	24.55	13.44	1.25		11.66	3.34	2.22	2.00	0.13	24.10				100
NCS HC 18809	Slag	0.30	16.50	21.94		6.55	0.18	1.03	0.024	0.69	35.21				100
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	P	S	TiO ₂	MgO	CaO	V ₂ O ₅	K ₂ O	Na ₂ O		Unit Size (in g)
NCS HC 19805	V Ti Blast Furnace Slag	0.80	22.67	13.85	0.74		0.234		9.05	25.57	0.44				100
NCS HC 19805a	V Ti Blast Furnace Slag	2.31	26.30	14.46	0.757	0.0060	0.390	19.98	8.82	25.37	0.347	0.740	0.258		100
NCS HC 19805b	V Ti Blast Furnace Slag	1.28	25.41	13.55	0.607	0.0036	0.477	22.35	7.48	27.28	0.272				100
Number	Name	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	S	V ₂ O ₅	TiO ₂	Cr ₂ O ₃			Unit Size (in g)
NCS HC 19813	High-Titanium Slag	6.43	5.50	2.64	1.52	5.28	1.08		0.118		77.66				100
NCS HC 19814	High-Titanium Slag	1.08	4.13	3.04	1.83	7.27	0.74		0.247		84.94				100
NCS HC 19815	High-Titanium Slag	1.02	1.92	2.62	0.287	2.67	1.21		0.166		94.69				100
NCS HC 19817	V Slag	30.48	16.90	3.84	1.96	3.34	6.87	0.054	0.054	16.18	10.87	2.40			100
NCS HC 19818	V Slag	28.96	15.93	4.05	1.57	3.28	7.80	0.037	0.053	17.69	11.53	3.03			100
NCS HC 19819	V Slag	30.08	15.79	4.15	1.79	3.41	8.36	0.026	0.201	2.20	11.37	2.60			100
NCS HC 19820	V Slag	32.30	16.47	3.98	2.12	3.37	7.36	0.040	0.195	1.78	10.80	2.00			100
NCS HC 19821	V Ti Slag	0.695	1.13	56.53	9.01	27.14	0.081	0.013	0.013	3.18					100
NCS HC 19822	V Ti Slag	0.442	0.570	65.99	10.20	18.20	0.060	0.006	0.013	3.41					100
Number	Name	Mn	Fe	P	SiO ₂	Al ₂ O ₃	CaO	MgO	S						Unit Size (in g)
NCS HC 25801	Rich Slag-Manganese	35.31	1.77	0.56	33.47	1.91	7.79	3.99	0.66						50
Number	Name	S	SiO ₂	CaO	TCa	MgO	Al ₂ O ₃	TFe	K ₂ O	Na ₂ O	MnO	P ₂ O ₅	TiO ₂	FeO	Unit Size (in g)
NCS HC 28822	Slag	1.13	31.54	38.01		10.86	16.19	0.317	0.535	0.369	0.47	0.014	1.39	0.44	50g
NCS HC 28823	Slag	0.418	15.37		24.94	8.14	11.26	8.5	0.082	0.139	0.882	0.222	1.25	5.74	50g
NCS HC 28824	Slag	0.099	15.42		30.49	5.74	1.77	18.4	0.08	0.043	2.63	1.82	0.744	13.91	50g
		F													
NCS HC 28822	Slag														
NCS HC 28823	Slag	4.14													
NCS HC 28824	Slag	0.34													

Section 5 Slag, Refractory(Powder)

Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		SiO ₂	TCa	Na ₂ O	Al ₂ O ₃	MgO	FC	TC	F*					
NCS HC 26801	Continuous Casting mold powder	18.96	12.89	9.86	16.99	1.39	18.14	19.97	4.47					50
NCS HC 26803	Continuous Casting mold powder	30.1	30.78	0.52	2.14	1.3	4.06	5.98	10.59					50
NCS HC 26804	Continuous Casting mold powder	34.95	19.13	4.99	5.3	0.78	14.49	15.86	5.15					50
NCS HC 26805	Continuous Casting mold powder	41.31	21.46	4.07	6.93	3.26	1.57	3.06	4.79					50
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		TFe	CaO	SiO ₂	MgO	Al ₂ O ₃	MnO	TiO ₂	P ₂ O ₅	S				
NCS HC 28803	Blast Furnace Slag	0.92	36.26	31.82	9.92	16.85	0.78	0.52	0.018	0.75				60
NCS HC 28804	Blast Furnace Slag	2.01	37.13	31.18	7.52	16.26	1.23	0.58	0.043	0.79				60
NCS HC 28805	Blast Furnace Slag	0.76	39.20	34.91	9.27	12.80	0.090	0.42	0.012	0.90				60
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		S	SiO ₂	CaO	TCa	MgO	Al ₂ O ₃	TFe	K ₂ O	Na ₂ O	MnO		P ₂ O ₅	TiO ₂
NCS HC 28806	Slag	1.15	30.36	37.53		10.8	16.92	0.211	0.46	0.39	0.414	0.013	0.762	50
NCS HC 28807	Slag	0.134	14.54		32.32	7.27	3.67	13.54	0.033	0.057	4.06	1.72	1.13	50
NCS HC 28808	Slag	0.885	29.62	35.71		10.92	18.05	0.48	0.42	0.36	0.542	0.027	0.753	50
		FeO	F											
NCS HC 28806	Slag	0.35												
NCS HC 28807	Slag	10.44	0.76											
NCS HC 28808	Slag	0.55												
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		TFe	TCa	SiO ₂	MgO	Al ₂ O ₃	MnO	TiO ₂	P ₂ O ₅	S				
NCS HC 28809	Converter Slag	13.50	32.65	15.40	7.75	4.38	2.30	1.02	1.67	0.195				60
NCS HC 28810	Converter Slag	16.52	33.35	14.45	7.1	1.76	2.78	1.25	1.60	0.120				60
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		Al ₂ O ₃	CaO	MgO	P ₂ O ₅	Fe ₂ O ₃	TiO ₂	MnO	SiO ₂	K ₂ O	Na ₂ O		L.O.L	C
NCS HC 28811	Bauxite	46.52	0.69	0.37	0.35	14.01	1.36	0.13	22.96	0.25	0.1	12.75	0.2	50
NCS HC 28812	Bauxite	60.41	0.51	0.26	0.3	9.69	2.22	0.082	17.82	0.22	0.07	7.96	0.14	50
NCS HC 28813	Bauxite	70.28	0.37	0.18	0.25	6.64	2.85	0.053	14.2	0.2	0.051	4.57	0.099	50
NCS HC 28814	Bauxite	83.07	0.22	0.088	0.18	2.71	3.64	0.011	9.69	0.17	0.022	0.15	0.05	50
NCS HC 28815	Bauxite	88.55	0.15	0.073	0.23	1.75	3.69			0.11	0.017		0.018	50
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		TFe	SiO ₂	CaO	MgO	Al ₂ O ₃	FeO	MnO	TiO ₂	S	P ₂ O ₅		K ₂ O	Na ₂ O ₃
NCS HC 28816	Coverter Slag	18.66	12.8	45.02	8.23	2.07	14.24	2.75	0.7	0.12	1.99	0.033	0.13	50
NCS HC 28817	Coverter Slag	19.96	17.71	36.43	8.51	1.64	14.49	3.46	1.04	0.034	1.95	0.083	0.076	50
NCS HC 28818	Coverter Slag	21.04	18.81	37.31	5.23	1.56	17.01	3.79	1.11	0.034	1.86	0.082	0.046	50
NCS HC 28819	Coverter Slag	16.84	22.21	37.01	6.89	1.93	14.02	5.02	0.97	0.056	2.7	0.087	0.046	50
NCS HC 28820	Coverter Slag	16.56	12.35	45.44	6.91	1.52	13.87	2.29	0.65	0.12	2.28	0.032	0.091	50
NCS HC 28821	Coverter Slag	15.33	14.17	44.45	7.01	2.76	11.43	2.4	0.65	0.17	2.21	0.1	0.13	50
		Cr ₂ O ₃	V ₂ O ₅	As	Pb	Zn	F	Cd						
NCS HC 28816	Coverter Slag	0.076	0.122	0.0002	0.0002	0.0011	0.12	0.0001*						
NCS HC 28817	Coverter Slag	0.063	0.346	0.0003	0.0003	0.0014	0.059	0.0001*						
NCS HC 28818	Coverter Slag	0.079	0.35	0.0003	0.0003	0.0014	0.043	0.0001*						
NCS HC 28819	Coverter Slag	0.105	0.2	0.0001	0.0003	0.0003	0.16	0.0001*						
NCS HC 28820	Coverter Slag	0.089	0.229	0.0002	0.0035	0.003	0.18	0.0001*						
NCS HC 28821	Coverter Slag	0.12	0.186	0.0003	0.0074	0.01	0.39	0.0001*						
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		FeO	SiO ₂	Al ₂ O ₃	CaO	Sn								
NCS HC 35801	Sn Slag	46.18	19.61	7.36	4.12	11.96								70
NCS HC 35802	Sn Slag	22.22	37.49	9.32	19.76	2.32								70
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		CaO	SiO ₂	MgO	Al ₂ O ₃	TFe	FeO	MnO	TiO ₂	P ₂ O ₅	S		K ₂ O	Na ₂ O
NCS HC93801	Slag	42.52	34.91	8.1	12.09	0.63	0.78	0.13	0.56	0.01	1.15	0.52	0.27	50
NCS HC93802	Slag	25.87	22.96	5.98	30.29	2.39	3.31	1.5	9.44	0.08	0.56	0.36	0.17	50
NCS HC93803	Slag	55.59	12.22	6.91	18.02	1.05	0.61	2.18	2.78	0.036	0.021	0.069	0.034	50
NCS HC93804	Slag	22.3	31.11	16.36	4.18	10.99	11.73	5.21	6.01	0.503	0.095	0.128	0.051	50
NCS HC93805	Slag	30.86	42.4	20.5	2.14	1.7	1.94	0.2	1.95	0.038	0.023	0.24	0.061	50
NCS HC93806	Slag	50.73	8.17	3.39	23.79	9.67	7.37	0.45	0.88	0.022	0.032	0.052	0.047	50

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Number	Name	C	S	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS 11003	C&S in Steel	0.322	0.020				100	chip
NCS NS 11011	C&S in Steel	0.235	0.039				100	chip
NCS NS11015b	Ultra-Low C and S in Pure Iron	0.0006	0.0017				50	chip
NCS NS 11026	C&S in Steel	0.041	0.0039				100	chip
NCS NS 11039	C&S in Steel	0.0051	0.0058				100	chip
NCS NS 11040	C&S in Steel	0.019	0.0116				100	chip
NCS NS 11041	C&S in Steel	0.004	0.0053				100	chip
Number	Name	N	O	Chemical Composition(μg/g)			Unit Size (in g)	Form
NCS NS 11037	O, N, in steel	1090	66				50	D4.0×5.0mm
NCS NS 11030	O in Copper		2.8					D6.0×110mm
NCS NS 11031	O in Copper		10				20	D4.8×6.5mm
NCS NS 11032	O in Copper		18				20	D4.8×6.5mm
NCS NS 11033	O in Copper		135				20	D4.8×6.5mm
NCS NS 11038	O in Copper		376				25	D4.8×6.5mm
Number	Name	O(%)	N(%)	H(%)	Chemical Composition(Percent)		Unit Size (in g)	Form
					Sample weight	Sample size (mm)		
NCS NS 11043	O, N in steel	0.0041	0.0381	0.00005	0.5g	D 6.35		Ball
Number	Name	O	N	H	Chemical Composition(Percent)		Unit Size (in g)	Form
					Sample Weight(g)	Sample Size(mm)	Sample form	
NCS NS 11044	O, N, H in Stainless steel	0.0025	0.058	0.00020	1.0±0.1	D6.35	50	Ball
NCS NS 11045	O, N, H in Stainless steel	0.0048	0.026	0.00020	1.0±0.1	D6.35	50	Ball
NCS NS 11046	N in Stainless steel		0.0067		1.0±0.1	D6.35	50	Ball
NCS NS 11047	N in Stainless steel		0.2076		0.50g/piece	D4.0x5.0	50	stick
Number	Name	C	S	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS 11048	C, S in steel	0.067	0.058				100	Chip
NCS NS 11049	C, S in steel	0.116	0.002				100	Chip
Number	Name	O (%)	N (%)	Ball Weight(g)	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS11050	O, N in steel	0.012	0.0019	1			50	Ball
NCS NS11051	O, N in steel	0.0012	0.0045	1			50	Ball
NCS NS11052	O, N in steel	0.0062	0.00075	1			50	Ball
NCS NS11053	O, N in steel	0.0022	0.0032	1			50	Ball
NCS NS11054	O, N in steel	0.0023	0.0096	1			50	Ball
NCS NS11055	O, N in steel	0.00058	0.0028	1			50	Ball
NCS NS11056	O, N in steel	0.0107	0.142	1			50	Ball
Number	Name	C	S	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS 13001	C&S in Steel	2.51	0.020				100	chip
NCS NS 13005	C&S in Steel	0.485	0.024				100	chip
Number	Name	N	Chemical Composition(Percent)				Unit Size (g or pellet)	Form
NCS NS 13009	N in Steel	0.0078					100	chip
NCS NS 13010	N in Steel	0.0096					100	chip
NCS NS 13011	N in Steel	0.0099					100	chip
NCS NS 13012	N in Steel	0.012					100	chip

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Number	Name	C	S	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS 13020	C in Steel	0.1				100	chip
NCS NS 13021	C in Steel	0.21				100	chip
NCS NS 13022	C in Steel	0.37				100	chip
NCS NS 13023	C in Steel	0.48				100	chip
NCS NS 13024	C in Steel	0.59				100	chip
NCS NS 13025	C in Steel	0.725				100	chip
NCS NS 13026	C in Steel	0.81				100	chip
NCS NS 13027	S in Steel		0.0105			70	chip
NCS NS 13028	S in Steel		0.017			70	chip
NCS NS 13029	S in Steel		0.037			70	chip
NCS NS 13032	S in Steel		0.096			70	chip
Number	Name	N	Chemical Composition(Percent)			Unit Size (in g or)	Form
NCS NS 13033	N in Steel	0.0043				100	chip
NCS NS 13034	N in Steel	0.0044				100	chip
NCS NS 13036	N in Steel	0.0064				100	chip
NCS NS 13037	N in Steel	0.0067				100	chip
Number	Name	N	Chemical Composition(Percent)			Unit Size (in g or)	Form
NCS NS 14003	N in Steel	0.0048				100	chip
Number	Name	C(%)	S(%)	Chemical Composition		Unit Size (in g)	Form
NCS NS 16001	C.S in pig iron	2.02	0.0014			100	chip
NCS NS 16002	C.S in pig iron	3.60	0.0186			100	chip
Number	Name	[H] ppm	Chemical Composition			Unit Size (in g)	Form
NCS NS 20001a	H in steel	6.00		Weight of ball (g)		20	ball
NCS NS 20025b	H in steel	1.1		1.034		20	ball
Number	Name	O ppm	Chemical Composition			Unit Size (in g)	Form
NCS NS 20035b	O, N in steel	22		N ppm		50	ball
Number	Name	O(%)	N(%)	Mass of the ball (g)	Diameter of the ball (mm)	Unit Size (in g)	Form
NCS NS 20049	O, N in steel	0.0058	0.0040	1.056	6.35	50	ball
NCS NS 20050	O, N in steel	0.0166	0.0026	1.047	6.35	50	ball
Number	Name	O	N	Chemical Composition		Unit Size (in g)	Form
NCS NS 18018	O, N in Steel	0.0043	0.0136			50	
NCS NS 18019	O, N in Steel		0.0135			50	
NCS NS 18020	O, N in Steel	0.0029	0.0018			50	
NCS NS 18021	O, N in pure iron powder	0.188	0.0077			25	
NCS NS 18022	O, N in pure iron powder	0.205	0.0029			25	
NCS NS 18023	O, N in pure iron powder	0.543	(0.0065)			25	

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Number	Name	C	S	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS 18003	C, S in Steel	0.082	0.035			100	chip
NCS NS 18004	C, S in Steel	0.171	0.0102			100	chip
NCS NS 18005	C, S in Steel	0.204	0.022			100	chip
NCS NS 18006	C, S in Steel	0.282	0.033			100	chip
NCS NS 18007	C, S in Steel	0.312	0.026			100	chip
NCS NS 18008	C, S in Steel	0.376	0.028			100	chip
NCS NS 18009	C, S in Steel	0.415	0.020			100	chip
NCS NS 18010	C, S in Steel	0.455	0.019			100	chip
NCS NS 18011	C, S in Steel	0.543	0.012			100	chip
NCS NS 18012	C, S in Steel	0.610	0.0095			100	chip
NCS NS 18013	C, S in Steel	0.890	0.022			100	chip
NCS NS 18014	C, S in Steel	0.990	0.0041			100	chip
NCS NS 18015	C, S in Steel	1.09	0.018			100	chip
NCS NS 18016	C, S in Steel	1.19	0.0080			100	chip
NCS NS 18024	C, S in Steel	0.121	0.013			100	
NCS NS 18025	C, S in Steel	0.15	0.013			100	
NCS NS 18026	C, S in Steel	0.357	0.013			100	
NCS NS 18027	C, S in Steel	0.586	0.039			100	
NCS NS 18028	C, S in Steel	0.755	0.0098			100	
NCS NS 18029	C, S in Steel	1.01	0.02			100	
Number	Name	O	N	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS 21003b	O and N in Bearing Steel	0.0012	0.0055	1.0673±0.0010	6.26	50	ball
NCS NS 21004a	O and N in Bearing Steel	0.0022	0.0044	1.0673±0.0010	6.26	50	ball
NCS NS 21004b	O, N in steel	0.0025	0.0038	1.0		50	
Number	Name	O	N	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS 21012-1	O, N, H in Titanium Alloy	0.076	0.0090	0.0010			bar
NCS NS 21012-2	O, N, H in Titanium Alloy	0.096	0.0052	0.0009			bar
Number	Name	N	Chemical Composition(Percent)		Unit Size (in g)	Form	
NCS NS 21013-1	N in Steel	0.075			100	chip	
NCS NS 21013-2	N in Steel	0.175			100	chip	
NCS NS 21013-3	N in Steel	0.222			100	chip	
NCS NS 21013-4	N in Steel	0.313			100	chip	
NCS NS 21013-5	N in Steel	0.540			100	chip	
NCS NS 21013-6	N in Steel	0.66			100	chip	
Number	Name	C	S	Chemical Composition(Percent)		Unit Size (in g)	Form
NCS NS 21014	C, S in steel	0.0021	0.0052			100	
NCS NS 21015	C, S in steel	0.0010	0.0015			100	
NCS NS 21015a	C, S in steel	0.0012	0.0017			100	
Number	Name	[H] ppm		Chemical Composition		Unit Size (in g)	Form
NCS NS 20042	H in stainless steel	3.55				20	ball
Number	Name	H(ppm)	Chemical Composition(Percent)		Unit Size	Form	
			O (%)	N (%)	Ball Weight (g)	Ball size(mm)	
NCS NS20001b	Hydrogen in Steel	6.6					20pieces, 1g/piece
NCS NS20025c	Hydrogen in Steel	0.9					20pieces, 1g/piece
NCS NS21002d	O, N in Bearing Steel		0.0005	0.0057	1.048±0.001g	D 6.35	50pieces, 1g/piece

Section 6 Gas in Metal

Number	Name	Chemical Composition(μg/g)					Unit Size (in g)	Form
NCS NS 21002	O N in Stainless Steel	8.4±0.6		57±1			50 Pieces	ball
Number	Name	Chemical Composition(Percent)					Unit Size (in g)	Form
NCS NS 28004	C S in Steel	0.416		0.022			100	chip
NCS NS 28005	C S in Steel	0.462		0.0096			100	chip
Number	Name	Chemical Composition(Percent)					Unit Size (in g)	Form
		C	S	O	N	mass(g/p)		
NCS NS 28021	C S in Steel	0.16	0.028				100	chip
NCS NS 28025	C S in Steel	0.330	0.024				100	chip
NCS NS 28027	C S in Steel	0.523	0.017				100	chip
NCS NS 28029	C S in Steel	0.465	0.020				100	chip
NCS NS 28031	C S in Steel	0.985	0.012				100	chip
NCS NS 28040	O, N in steel			0.0125	0.0021	1	50	
NCS NS 28041	O, N in steel			0.0015	0.0042	1	50	
Number	Name	Chemical Composition(μg/g)					Unit Size (in g)	Form
		[H]						
NCS NS 35001	H in steel	2.9					20 pieces	
NCS NS 35001a	H in steel	3.0					20 pieces	
NCS NS 35002	H in steel	7.2					20 pieces	
NCS NS 35003	H in steel	0.8					20 pieces	
NCS NS 35003a	H in steel	0.9					20 pieces	
NCS NS 35003b	H in steel	1.3					20 pieces	
NCS NS 35004	H in steel	1.8					20 pieces	
NCS NS 35005	H in steel	2.2					20 pieces	
NCS NS 35006	H in steel	4.1					20 pieces	
Number	Name	Chemical Composition(μg/g)					Unit Size (in g)	Form
		O	N	H				
NCS NS 35007	O, N, H in steel	33	305	5.8			20 pieces	
NCS NS 35008	O, N, H in steel	38	330	1.6			20 pieces	
Number	Name	Chemical Composition(μg/g)					Unit Size (in g)	Form
		[H]						
NCS NS35009	H in steel	0.5					20 pieces	
NCS NS35009a	H in steel	0.6					20 pieces	
Number	Name	Chemical Composition(Percent)					Unit Size (in g)	Form
		O	N	mass(g/p)				
NCS NS 28036	O and N in Steel	0.0065	0.0067	1			50	ball
NCS NS 28037	O and N in Steel	0.0035	0.0081	1			50	ball
NCS NS 28037a	O and N in Steel	0.0043	0.0100	1			50	ball
NCS NS 28038	O and N in Steel	0.0037	0.0253	0.5			50	ball

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Number	Name	C	S	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS 93004	C. S in Steel	0.293	0.040				100	chip
NCS NS 93005	C. S in Steel	0.357	0.018				100	chip
NCS NS 93008	C. S in Steel	0.251	0.022				100	chip
NCS NS 93009	C. S in Steel	0.310	0.031				100	chip
NCS NS 93011	C. S in Steel	0.512	0.0095				100	chip
NCS NS 93012	C. S in Steel	0.375	0.046				100	chip
NCS NS 93014	C. S in Steel	0.195	0.030				100	chip
Number	Name	O (%)	N (%)	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS93017	O, N in steel	0.00049	0.0042				50 pieces	
NCS NS93018	O, N in steel	0.0117	0.0023				50 pieces	
NCS NS93019	O, N in steel	0.0021	0.0035				50 pieces	
NCS NS93020	O, N in steel	0.0029	0.0036				50 pieces	
NCS NS93021	O, N in steel	0.0160	0.0017				50 pieces	
NCS NS93022	O, N in steel	0.0130	0.0038				50 pieces	
NCS NS93023	O, N in steel	0.0078	0.0023				50 pieces	
NCS NS93024	O, N in steel	0.0011	0.0055				50 pieces	
NCS NS93025	O, N in steel	0.0157	0.0018				10 pieces	
NCS NS93026	O, N in steel	0.0011	0.0055				10 pieces	
NCS NS93027	O, N in steel	0.0120	0.0022				50 pieces	
Number	Name	N(%)	Chemical Composition				Unit Size (in g)	Form
NCS NS 57012	N in Titanium Alloy	0.013					10	stick
Number	Name	C	S	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS11057	Carbon and Sulphur in cast iron	3.98	0.079				50	
NCS NS11058	Carbon and Sulphur in cast iron	3.76	0.022				50	
NCS NS11059	Carbon and Sulphur in cast iron	1.95	0.143				50	
NCS NS11060	Carbon and Sulphur in cast iron	2.93	0.101				50	
Number	Name	O (%)	N (%)	Chemical Composition(Percent)			Unit Size (in g)	Form
				H(%)	Ball Weight (g)	Ball size(mm)		
NCS NS11061	O, N in carbon steel	0.0016	0.0036		1.06±0.01	D 6.35	50piece	
NCS NS11062	O, N in carbon steel	0.0012	0.0022		1.06±0.01	D 6.35	50piece	
NCS NS11063	O,N in stainless steel	0.003	0.044		0.52±0.01	D 5.00	50piece	
NCS NS11064	O,N in stainless steel	0.0051	0.028		1.07±0.01	D 6.35	50piece	
NCS NS11065	O,N in stainless steel	0.0019	0.007		1.07±0.01	D 6.35	50piece	
NCS NS11066	O,N in bearing steel	0.00042	0.005		1.04±0.01	D 6.35	50piece	
NCS NS11067	O,N in bearing steel	0.00044	0.0061		1.04±0.01	D 6.35	50piece	
NCS NS11068	O,N in bearing steel	0.0003	0.0028		1.04±0.01	D 6.35	50piece	
NCS NS11071	O,N in bearing steel	0.00065	0.0068		1.00±0.01	D 6.35	50piece	
NCS NS11072	O, N in carbon steel	0.018	0.0014		1.07±0.01	D 6.35	50piece	
NCS NS11073	O,N in stainless steel	0.0034	0.019		0.52±0.01	D 5.00	50piece	
NCS NS11074	O, N in carbon steel	0.011	0.0018		1.05±0.01	D 6.35	50piece	
NCS NS11075	O,N in bearing steel	0.0014	0.0089		1.05±0.01	D 6.35	50piece	
NCS NS11076	O, N in carbon steel	0.014	0.0052		1.00±0.01	D 6.35	50piece	
NCS NS11077	O,N,H in stainless steel	0.0036	0.034	0.00018	1.04±0.01	D 6.35	50piece	
NCS NS11078	O,N,H in stainless steel	0.0031	0.031	0.00058	1.04±0.01	D 6.35	50piece	
NCS NS11080	H in stainless steel			0.00064	1.06±0.01	D 6.35	20piece	
NCS NS11081	H in stainless steel			0.00027	1.00±0.01	D 4.10X10	20piece	
NCS NS11082	H in stainless steel			0.00072	1.01±0.01	D 3.80X12	20piece	
NCS NS11083	H in stainless steel			0.00013	1.06±0.01	D 6.35	20piece	
NCS NS11084	H in stainless steel			0.00022	1.06±0.01	D 6.35	20piece	

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Number	Name	C	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS11085	Carbon and Sulphur in Alloy	0.087	0.0053			100	
NCS NS11086	Carbon and Sulphur in Alloy	0.116	0.002			100	
NCS NS11087	Carbon and Sulphur in Alloy	0.113	0.0023			100	
NCS NS11088	Carbon and Sulphur in Alloy	0.411	0.004			100	
Number	Name	O	N	Ball Weight (g)		Unit Size (in g)	Form
NCS NS28042	O and N in Carbon Steel	0.0033	0.0047	1		50pieces , 1g/piece	
NCS NS28043	O and N in Carbon Steel	0.0021	0.0034	1		50pieces , 1g/piece	
NCS NS28044	O and N in Carbon Steel	0.0023	0.0026	1		50pieces , 1g/piece	
NCS NS93028	O, N in steel	0.0221	0.002	0.5g		50pieces , 0.5g/piece	
NCS NS93029	O, N in steel	0.0024	0.0826	1g		50pieces , 1g/piece	
NCS NS93030	O, N in steel	0.0033	0.0233	1g		50pieces , 1g/piece	
NCS NS93031	O, N in steel	0.0044	0.0214	1g		50pieces , 1g/piece	
Number	Name	O	N	H		Size	
NCS NS11089	O, N, H in titanium alloy	0.045	0.005	0.0014		2x2x120 mm , 5 pieces	
NCS NS11090	O, N, H in titanium alloy	0.285	0.0034	0.0017		2x2x120 mm , 5 pieces	
NCS NS11091	O, N, H in titanium alloy	0.07	0.0095	0.012		2x2x120 mm , 5 pieces	
NCS NS11092	O, N, H in titanium alloy	0.13	0.03	0.0097		2x2x120 mm , 5 pieces	
NCS NS11093	O, N, H in titanium alloy	0.144	0.0097	0.027		2x2x120 mm , 5 pieces	
Number	Name	O (%)	N (%)	Ball Weight(g)		Size	
NCS NS11094	O, N in steel	0.0019	0.0062	1		D6.35mm , 50 pieces	
NCS NS11095	O, N in steel	0.0022	0.081	1		D6.35mm , 50 pieces	
NCS NS11096	O, N in steel	0.0042	0.022	1		D6.35mm , 50 pieces	
NCS NS11097	O, N in steel	0.0008	0.0072	1		D6.35mm , 50 pieces	
NCS NS11098	O, N in steel	0.0031	0.003	1		D6.35mm , 50 pieces	
NCS NS11099	O, N in steel	0.01	0.069	0.5		D5.00mm , 50 pieces	
Number	Name	O				Unit Size (in g)	
NCS NS51002-1	Oxygen in Niobium powder	0.073				80	
NCS NS51002-2	Oxygen in Niobium powder	0.141				80	
NCS NS51002-3	Oxygen in Niobium powder	0.366				80	
NCS NS51002-4	Oxygen in Niobium powder	0.67				80	
NCS NS51002-5	Oxygen in Niobium powder	1.06				80	
Number	Name	O (%) Certified Value	N (%) Certified Value	Ball Weight (g)	Ball size (mm)	Unit Size (in g)	
NCS NS 11043a	O, N in steel	0.0042	0.03	0.5	f5.00	50 PIECES	1g/PIECE
NCS NS 11044a	O, N in steel	0.0018	0.063	1	f6.35	50 PIECES	1g/PIECE
NCS NS 11055a	O, N in steel	0.0002	0.0022	1	f6.35	50 PIECES	1g/PIECE
NCS NS 11055b	O, N in steel	0.00054	0.0031	1	f6.35	50 PIECES	1g/PIECE
NCS NS 11055C	O, N in steel	0.00065	0.0023	1		50 PIECES	1g/PIECE
NCS NS 11061a	O, N in steel	0.0016	0.0031	1	f6.35	50 PIECES	0.5g/PIECE
NCS NS 11063a	O, N in steel	0.0033	0.047	0.5	f5.00	50 PIECES	0.5g/PIECE
NCS NS 11063b	O, N in steel	0.0028	0.048	0.5	f5.00	50 PIECES	0.5g/PIECE
NCS NS 11065a	O, N in steel	0.0011	0.0071	1	f6.35	50 PIECES	1g/PIECE
NCS NS 11066a	O, N in steel	0.00084	0.0041	1	f6.35	50 PIECES	1g/PIECE
NCS NS 11076a	O, N in steel	0.0102	0.0052	1	f6.35	50 PIECES	
Number	Name	N	C	S		Unit Size (in g)	
NCS NS 11100	Nitrogen, Carbon and Sulphur in steel	0.161	0.066	0.0033		50	

Section 6 Gas in Metal

Number	Name	Certified Value					Unit Size (in g)	Form	
		O	N	H					
NCS NS 11101	High Nitrogen in steel		0.293				50		
NCS NS 11102	High Nitrogen in steel		0.564				50		
NCS NS 11103	High Nitrogen in steel		0.986				50		
NCS NS 11104	High Nitrogen in steel		0.59				50		
NCS NS 11105	High Nitrogen in steel		0.807				50		
NCS NS 11106	High Nitrogen in steel		0.84				50		
NCS NS 11107	O, N, H in titanium alloy	0.113	0.018	0.0035			4 X 25 PIECE/BTL		
NCS NS 11108	O, N, H in titanium alloy	0.099	0.003	0.0014			4 X 25 PIECE/BTL		
Number	Name	O (%)	N (%)	Ball Weight (g)	Ball size (mm)			Unit Size (in g)	Form
NCS NS 28036a	O, N in steel	0.0083	0.0067	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28042a	O, N in steel	0.0031	0.0058	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28042b	O, N in steel	0.003	0.0043	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28042c	O, N in steel	0.0034	0.0042	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28044a	O, N in steel	0.0018	0.002	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28044b	O, N in steel	0.0024	0.0032	1	D 6.35			50 PIECES	1g/PIECE
NCS NS 28045	O, N in steel	0.0035	0.0648	1			50 PIECES		
Number	Name	O	N	H	Sample weight (g)	Sample size (mm)	Unit Size (in g)	Form	
NCS NS11109	O, N, H in Stainless steel	0.023	0.04	0.0009	0.5	D3.85x5.70	50	stick	
NCS NS11110	O, N, H in Stainless steel	0.0027	0.048	0.00076	1	D6.35	50	Ball	
NCS NS11111	O, N, H in Stainless steel	0.017	0.064	0.001	0.5	D3.85x5.70	50	stick	
NCS NS11112	O, N, H in Stainless steel	0.0037	0.046	0.00033	1	D6.35	50	Ball	
Number	Name	Certified Value					Unit Size (in g)	Form	
		O (%)	N (%)						
NCS NS11113	O, N in steel	0.0032	0.037					50	
NCS NS11114	O, N in steel	0.0053	0.0024					50	
NCS NS11115	O, N in steel	0.002	0.033					50	
NCS NS11116	O, N in steel	0.0065	0.0025					50	
NCS NS11117	O, N in steel	0.0048	0.0025					50	
NCS NS11118	O, N in steel	0.0085	0.0021					50	
NCS NS11119	O, N in steel	0.0045	0.0029					50	
NCS NS11120	O, N in steel	0.0031	0.0034					50	
Number	Name	C	S	N(%)	Sample weight (g)			Unit Size (in g)	Form
NCS NS18030	C, S in Steel	0.942	0.0037					100	
NCS NS 18031	C, S in Steel	0.945	0.003					100	
NCS NS18032	N in Steel			0.0063	0.5			50	
NCS NS18033	N in Steel			0.0146	0.75			50	
NCS NS18034	High N in Steel			0.409	0.56			50	
NCS NS18035	High N in Steel			0.419	0.51			50	
Number	Name						Unit Size	Form	
		(ppm)							
NCS NS 20001b	Hydrogen in Steel	6.6						20piece swith 1g/ball	
NCS NS 20006d	Hydrogen in Steel	1.9						20piece swith 1g/ball	
NCS NS 20025c	Hydrogen in steel	0.9						20piece swith 1g/ball	

Section 6 Gas in Metal

Number	Name	C	S	Unit Size (in g)	Form
NCS NS20051—1	Carbon and Sulfur in stainless steel	0.013	0.002	100	
NCS NS20051—2	Carbon and Sulfur in stainless steel	0.016	0.021	100	
NCS NS20051—3	Carbon and Sulfur in stainless steel	0.02	0.014	100	
NCS NS20051—4	Carbon and Sulfur in stainless steel	0.029	0.014	100	
NCS NS20051—5	Carbon and Sulfur in stainless steel	0.071	0.061	100	
NCS NS20051—6	Carbon and Sulfur in stainless steel	0.078	0.0071	100	
NCS NS20051—7	Carbon and Sulfur in stainless steel	0.082	0.005	100	
NCS NS20051—8	Carbon and Sulfur in stainless steel	0.099	0.0042	100	
NCS NS20051—9	Carbon and Sulfur in stainless steel	0.123	0.024	100	

Section 7 Nonferrous Metal(Chip)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (in g)					
		Cu	Sn	Zn	Mg	P	Ni	Cr	Mn	Fe	Ti	Si						
NCS HC 28933	Low Tin Aluminum Alloy	2.53	7.05				1.88			0.32		0.56	75					
NCS HC 28934	Low Tin Aluminum Alloy	1.52	7.40				0.77			0.31		3.83	75					
NCS HC 28938	ZL202	9.91		0.23	0.076				0.192	0.575		0.50	75					
NCS HC 28939	ZL203	3.91		0.235					0.187	0.57		0.52	75					
NCS HC 28942	LD6	2.28		0.053	0.65		0.0048	0.037	0.423	0.397	0.076	0.476	50					
NCS HC 28944	LD8	2.29		0.065	1.33		1.38		0.081	1.17	0.055	0.99	100					
NCS HC 28945	LD9	3.41		0.073	0.60		1.73		0.22	0.70	0.024	0.575	50					
NCS HC 28951	LY16	7.44		0.166	0.076		0.032		0.63	0.247	0.146	0.196	100					
NCS HC 28959	AL-2	0.073							0.0050	0.35			90					
NCS HC 28960	AL-1	0.0082							0.0020	0.20			70					
NCS HC 28961	AL-3	0.115						0.010	0.79				70					
NCS HC 28963	AL-0	0.011							0.0029	0.18			70					
NCS HC 28966	ZL103A	1.79		0.200	0.345	0.012		0.32	0.23				75					
NCS HC 28967	ZL104A	0.300		0.242	0.280			0.35	0.175				75					
NCS HC 28968	ZL105A	1.62		0.264	0.425		0.099		0.164	0.22			50					
NCS HC 28969	ZL106A	1.74		0.213	0.27				0.362	0.28			75					
NCS HC 28970	ZL108A	1.42		0.157	0.39		0.027		0.378	0.275			100					
NCS HC 28971	ZL108+RE	1.88		0.23	0.56				0.60	0.224			100					
NCS HC 28973	ZL108A+RE	1.71		0.593	0.697		0.0245		0.44	0.39			100					
NCS HC 28974	ZL107	3.73		0.385	0.071		0.048		0.062	0.51	0.005	7.03	50					
			Ti	Si	RE													
NCS HC 28959	AL-2	0.0015	0.52	0.075														
NCS HC 28960	AL-1	0.0015	0.20	0.143														
NCS HC 28961	AL-3	0.0025	0.79	0.163														
NCS HC 28963	AL-0	0.0022	0.15	0.92														
NCS HC 28966	ZL103A	0.0032	5.96															
NCS HC 28967	ZL104A		9.38															
NCS HC 28968	ZL105A		5.68															
NCS HC 28969	ZL106A		8.35															
NCS HC 28970	ZL108A		10.14															
NCS HC 28971	ZL108+RE	0.026	9.74	0.72														
NCS HC 28973	ZL108A+RE	0.0105	11.70	1.06														
Number	Name	Chemical Composition(Percent)												Unit Size (in g)				
		Cu	Zn	Mg	Ni	As	Ti	Si										
NCS HC 41913	LD7	2.18	0.0094	1.58	1.15	1.22	0.12	0.094						100				
NCS HC 41915	Al-00	0.0034				0.106		0.099						100				
NCS HC 41916	LD2	1.07		0.758		0.332	0.080	1.05						100				
NCS HC 41917	ZL103	2.55	0.097	0.55		0.33		5.66						100				
NCS HC 41918	ZL108	1.29	0.2	0.74		0.23	0.01	11.87						100				

Section 7 Nonferrous Metal(Chip)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Cu	Sn	Pb	Zn	Mg	Ni	Mn	Fe	Ti	Si	Be	Zr	
NCS HC 50920	Aluminum Alloy	1.14	0.0071	0.038	0.084	1.44	1.04	0.38	0.19		12.74			100
NCS HC 50922	Aluminum Alloy					0.028		1.53	0.282	0.117	0.216			100
NCS HC 50923	Aluminum Alloy	4.43	0.0075	0.044	0.152	0.028		0.094	0.662	0.154	1.22		0.101	100
NCS HC 50924	Aluminum Alloy	0.114			0.141	4.96		0.274	0.392	0.142	1.22			100
NCS HC 50928	Aluminum Alloy	3.99	0.0096	0.041	0.19	0.085		0.23	0.26		7.21			100
NCS HC 50931	Aluminum Alloy	0.28			12.80	0.14		0.26	0.27		6.93			100
NCS HC 50932	Aluminum Alloy	1.45	margin	0.016	0.042	0.18	0.58	0.33	0.20	0.12	5.12	0.037		100
NCS HC 50933	Aluminum Alloy	1.57	margin	0.016	0.043	0.12	0.60	0.25	0.26	0.1	9.57	0.17		100
NCS HC 50934	Aluminum Alloy	0.096	margin	0.0085	0.043	1.62	0.60	0.088	0.18		5.87			100
NCS HC 50937	Aluminum Alloy	3.98			0.175	1.49			0.482		0.673			100
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Cu	Zn	Mg	Ni	Cr	Mn	Fe	Sb	Ti	Si			
NCS HC 53902	Aluminum Alloy	0.095	0.10	0.02			1.38	0.38			0.18			50
NCS HC 53906	Aluminum Alloy	4.12	0.25	0.52	0.083		0.35	0.44		0.051	0.60			100
NCS HC 53907	Aluminum Alloy	6.31	0.11	0.086	0.094	0.19	0.39	0.26		0.038	0.45			100
NCS HC 53908	Aluminum Alloy	0.098	0.08	2.30	0.048		0.29	0.55		0.096	0.40			100
NCS HC 53913	Aluminum Alloy	0.11	0.16	0.055	0.0061		0.080	0.49		0.012	5.55			100
NCS HC 53914	Aluminum Alloy	0.015	0.096	0.010	0.0048		0.20	0.48		0.11	11.75			100
NCS HC 53916	Aluminum Alloy	1.52	6.17	2.44		0.17	0.39	0.23			0.29			100
NCS HC 53917	Aluminum Alloy	0.21	0.053	4.98	0.011		0.16	0.51		0.0098	0.40			100

Section 7 Nonferrous Metal(Chip)

2)Copper & Copper Alloy

Number		Name	Cu	Al	Sn	Chemical Composition(Percent)				Unit Size (in g)				
						Zn	P	Fe	Si					
NCS HC 28901	H68		68.55			31.33	0.023	0.0105		100				
NCS HC 28907	Q Sn4-0.3				4.02		0.322			100				
NCS HC 28910	Q Sn7-0.2		92.62		7.11		0.185			100				
NCS HC 28911	Q Sn6.5-0.1				6.25		0.21			100				
NCS HC 28912	Q Sn6.5-0.1				6.44		0.137			100				
NCS HC 28913	Q Sn6.5-0.4				6.35		0.137			100				
NCS HC 28920	ZQ Al9-2			8.29				0.14	2.09	100				
NCS HC 28922	ZQ Al10-3-1.5			9.17				2.98	1.64	100				
NCS HC 28927	H68		68.52			31.4	0.0023	0.0105		100				
NCS HC 28931	Tin Bronze				6.54		0.136			100				
Number		Name	Cu	Sn	Pb	Chemical Composition(Percent)				Unit Size (in g)				
						Zn	P	Fe	Sb	Si				
NCS HC 41904	ZQ Sn3-7-5-1		81.45	4.08	6.16	6.96	1.07				100			
NCS HC 41905	ZQ Sn17-4-4		72.25	4.24	17.62	5.37					100			
NCS HC 41909	Tin-Phosphor Bronze		93.72	5.79			0.423				150			
NCS HC 41910	Tin-Phosphor Bronze		92.85	6.82			0.238				100			
NCS HC 41911	Tin-Phosphor Bronze		91.73	7.93			0.106				100			
NCS HC 41912	Tin-Phosphor Bronze		93.70	5.79	0.021		0.372	0.011	0.006	0.001	100			
NCS HC 41924	Phosphor Bronze		92.85	6.82			0.238				150			
NCS HC 41925	Phosphor Bronze		91.73	7.92			0.106				150			
NCS HC 41926	Phosphor Bronze		93.70	5.79	0.021		0.372	0.011	0.0058	0.0012	150			
Number		Name	Cu	Al	Sn	Chemical Composition(Percent)				Unit Size (in g)				
						Pb	Zn	P	Mn	Fe	As	Sb	Bi	
NCS HC 43909	Q Al9-2			9.80					2.46					80
NCS HC 43914	H Sn62-1		61.67		0.89	0.089		0.0070		0.090		0.0048	0.0018	60
NCS HC 43918	H Sn70-1A		70.04		0.91						0.039			100
NCS HC 43919	H Al177-2A		77.39	2.04							0.044			100
NCS HC 43925	Q Sn6-6-2				5.94	2.90	6.06							50
Number		Name	Cu	Al	Sn	Chemical Composition(Percent)				Unit Size (in g)				
						Pb	Zn	Mg	P	Mn	Fe	Sb	Bi	
NCS HC 45913	H Pb59-1		58.87			1.30					0.022			100
NCS HC 45914	H Te59-1		59.22	0.46	0.54					0.73	0.88			100
NCS HC 45915	Tin Bronze				3.55	1.97	3.92							100
NCS HC 45916	Iron Bronze		58.00	0.26	0.54	0.19			0.0076	0.73	0.89	0.0091	0.0024	50
NCS HC 45918	Aluminum Bronze					0.019	20.81	0.033	0.0048	0.32	0.47	0.0020	0.0019	100
			Si	As	Ni									
NCS HC 45918	Aluminum Bronze		0.146	0.0098	14.87									
Number		Name	Cu	Al	Sn	Chemical Composition(Percent)				Unit Size (in g)				
						Pb	P	Fe	Sb	Bi				
NCS HC 50902	Copper Alloy		77.05	2.35		0.054		0.046	0.0043	0.0020				100
NCS HC 50904	Copper Alloy		57.54			0.78	0.012	0.78	0.0082	0.0020				100
NCS HC 50907	Copper Alloy		90.31		0.50	0.035	0.0064	0.044	0.0043	0.0020				100
NCS HC 50911	74-3		74.54			2.82	0.0069	0.11	0.0070	0.0018				100
Number		Name	Cu	Sn	Sb	Chemical Composition(Percent)				Unit Size (in g)				
NCS HC 28979	Ch Pb Sb 14-5		0.38	5.14	14.20									100
Number		Name	Al	Fe	Mn	Chemical Composition(Percent)				Unit Size (in g)				
						Ni	Pb	Si	Zn	C				
NCS HC93901	High Manganese Aluminum Bronze		10.97	5.41	10.16	3.02	0.034	0.183	0.114	0.034				100
NCS HC93902	High Manganese Aluminum Bronze		9.6	4.21	11.53	2.72	0.018	0.107	0.224	0.029				100
NCS HC93903	High Manganese Aluminum Bronze		8.16	3.22	13.52	2.42	0.014	0.147	0.312	0.025				100
NCS HC93904	High Manganese Aluminum Bronze		7.84	3.16	14.53	2.14	0.025	0.062	0.464	0.03				100
NCS HC93905	High Manganese Aluminum Bronze		6.51	2.46	16.69	1.81	0.011	0.047	0.517	0.027				100
NCS HC93906	High Manganese Aluminum Bronze		4.73	1.85	18.62	1.53	0.0012	0.013	0.628	0.011				100

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3)Lead Base Alloy

Number	Name	Cu	Sn	Pb	Sb	Bi	Chemical Composition(Percent)			Unit Size (in g)
NCS HC 28986	Pb60 Sn40	0.027	40.54	59.02	0.354	0.056				100
NCS HC 28987	Pb90 Sn10		10.12	89.84						100
Number	Name	Cu	Al	Sn	Zn	Fe	As	Sb	Bi	Unit Size (in g)
NCS HC 39901	Lead Base Alloy	1.63		15.69	0.105	0.041	0.065	16.01	0.028	100
NCS HC 39902	Lead Base Alloy	1.25		19.57	0.104	0.030	0.041	13.81	0.038	100
NCS HC 39903	Lead Base Alloy	2.62	0.0021	11.01	0.035	0.037	0.052	13.86	0.054	100
NCS HC 39904	Lead Base Alloy	0.5		7.44	0.0052		0.095	12.02	0.069	100
NCS HC 39905	Lead Base Alloy	0.31		4.81	0.0068		0.115	10.04	0.103	100
Number	Name	Cu	Sn	Pb	As	Sb	Bi	Chemical Composition(Percent)		Unit Size (in g)
NCS HC 41919	Lead Base Bearing Alloy	1.98	15.97	65.73	0.014	16.09	0.024			100
NCS HC 41920	Lead Base Bearing Alloy	2.88	5.69	76.22	0.012	15.02	0.0075			100
Number	Name	Cu	Sn	As	Sb	Chemical Composition(Percent)				Unit Size (in g)
NCS HC 50956	Lead Base Bearing Alloy	0.38	5.16	0.15	15.94					100

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4)Tin Base Alloy

Number	Name	Cu	Sn	Pb	Chemical Composition(Percent)					Unit Size (in g)	
NCS HC 28988	Ch Sn Sb4-4	4.54			As	Sb	Bi		100		
NCS HC 28989	Ch Sn Sb8-4	4.9			0.016	8.07	0.085		100		
NCS HC 28990	Ch Sn Sb9-7	8.00			0.027	9.00	0.008		100		
NCS HC 28994	Pb50 Sn50		51.15	48.80					100		
Number	Name	Cu	Sn	Pb	Chemical Composition(Percent)					Unit Size (in g)	
NCS HC 35902	Tin-Lead Solder	0.030	50.12		Zn	Fe	As	Sb	Bi	Ag	100
NCS HC 35903	Tin-Lead Solder	0.00090	30.12		(0.000083)		0.0034	1.73	0.127	0.047	100
NCS HC 35904	Tin-Lead Solder	0.0024	39.84		(0.000086)		0.0019	0.809	0.024	1.08	100
NCS HC 35905	Tin-Lead Solder	0.0019	49.72		(0.000086)		0.0032	0.409	0.021	3.61	100
NCS HC 35907	Tin-Lead Solder	0.0062	89.81		(0.000040)		0.013	0.036	0.0200	0.0024	100
NCS HC 35908	Tin-Lead Solder	0.029	3.66		0.000080		0.011	6.59	0.0045	0.0032	100
NCS HC 35910	Tin	0.029	99.79	0.076		0.0092	0.018	0.052	0.021		stick200
Number	Name	Cu	Al	Zn	Chemical Composition(Percent)					Unit Size (in g)	
NCS HC 39906	Tin Base Alloy	2.07		0.0028	Mn	Fe	As	Sb	Bi		100
NCS HC 39907	Tin Base Alloy	3.55	0.0036		9.30	0.038	0.070	12.03	0.064		100
NCS HC 39908	Tin Base Alloy	6.36	0.0029	0.0021	12.17	0.063	0.100	9.62	0.089		100
NCS HC 39909	Tin Base Alloy	6.97		0.0035	0.20	0.064	0.102	7.95	0.079		100
NCS HC 39910	Tin Base Alloy	4.64		0.0087	0.41	0.120		5.94	0.099		100
Number	Name	Cu	Sn	Pb	Chemical Composition(Percent)					Unit Size (in g)	
NCS HC 41921	Tin Base Alloy	4.06	86.61	1.32	As	Sb	Bi				100
NCS HC41922	Tin Base Alloy	6.72	80.27	1.20	0.020	11.81	0.012				100
Number	Name	Cu	Pb	Zn	Chemical Composition(Percent)					Unit Size (in g)	
NCS HC 50945	Z Ch Sn Sb D12-3-10	0.409	9.90		Fe	As	Sb	Bi			90
NCS HC 50947	Tin Alloy	7.11	0.323	0.0046	0.073	0.065	9.14	0.073			100
NCS HC 50949	Tin Alloy	4.09	9.90	0.0021	0.069	0.069	12.10	0.064			100

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5)Zinc Alloy

Number	Name	Cu	Al	Mg	Chemical Composition(Percent)			Unit Size (in g)	
NCS HC 28974	Z Zn Al4		4.84	0.083				100	
NCS HC 28975	Z Zn Al4-1	1.56	4.48	0.074				100	
Number	Name	Zn	PbO	Mn	CdO	L.O.I	Chemical Composition(Percent)		Unit Size (in g)
NCS HC 35911	Zinc oxit	99.67	0.0019	0.000051	0.00066	0.387			30
Number	Name	Cu	Al	Sn	Pb	Mg	Fe	Cd	Unit Size (in g)
NCS HC 50955	Zinc Alloy	3.93	7.49	0.0049	0.0092	0.048	0.058	0.0056	100
Number	Name	Cu	Pb	Fe	Cd	Chemical Composition(Percent)			Unit Size (in g)
NCS HC 52904	Zinc	0.00012	0.0029	0.0011	0.011				200

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6)Titanium Alloy & Other

Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	Si	Mo	Al	Zr	V	Fe							
NCS HC 57905	Titanium Alloy	0.0093			5.60			0.24							50
NCS HC 57909a	Titanium Alloy	0.013			6.20		4.02	0.17							50
NCS HC 57911a	Titanium Alloy	0.0084	0.29	3.41	6.66	1.80		0.048							50
Number	Name	Chemical Composition(μg/g)												Unit Size (in g)	
		La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	Yb ₂ O ₃		Lu ₂ O ₃
NSC HC 63901	Europia	12.8	3.4	15.2	11.8	15.3	16.8	12.2	11.3	15.0	12.6	10.2	16.3	11.6	5
		Y ₂ O ₃	Na ₂ O	SiO ₃ (Acid)	SiO ₃ (Base)	CaO	Fe ₂ O ₃	Nio	CuO	ZnO	PbO ₂				
NSC HC 63901	Europia	17.2	31.1	30.0	(40.5)	13.0	7.2	9.6	6.7	15.6	8.0				
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	Si	Al	Fe	Mo	V	Zr	Cd	Pb	Cu	Sn			
NCS HC11901	Titanium Alloy	0.012	0.261	6.74	0.097	3.37		1.52							20
NCS HC11902	Titanium Alloy	0.0093	0.018	6.24	0.191		4.19								20
NCS HC11903a	Zinc Alloy			0.111	0.032				0.005	0.0041	0.0046	0.0047			100
NCS HC11903b	Zinc Alloy			0.112	0.033				0.0045	0.0042	0.0043	0.0042			100

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb	Sn	Sr	
NCS HS 49701c-1	Aluminium Alloy	10.38	1.02	0.413	0.309	0.178	0.137	0.387	0.055	0.226	0.096	0.129	Φ62×30
NCS HS 49701c-2	Aluminium Alloy	6.91	0.840	1.41	0.452	0.888	0.099	0.711	0.078	0.098	0.047	0.086	Φ62×30
NCS HS 49701c-3	Aluminium Alloy	12.64	0.212	2.07	0.540	0.753	0.066	0.216	0.042	0.074	0.021	0.062	Φ62×30
NCS HS 49701c-4	Aluminium Alloy	3.49	0.324	3.56	0.970	1.21	0.054	0.977	0.112	0.033	0.0079	0.039	Φ62×30
NCS HS 49701c-5	Aluminium Alloy	7.9	0.486	0.076	0.800	0.041	0.174	0.049	0.022	0.014	0.0027	0.023	Φ62×30
NCS HS 49701c-6	Aluminium Alloy	0.894	1.37	5.08	0.078	1.53	0.025	1.33	0.182	0.174	0.107	0.0057	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr		Unit Size (mm)
NCS HS 49702a-1	Aluminium Alloy	0.352	0.136	0.191	0.153	0.78	0.087	0.137	6.66	0.070	0.087		Φ62×30
NCS HS 49702a-2	Aluminium Alloy	0.455	0.261	0.684	0.501	2.95	0.186	0.076	4.53	0.104	0.059		Φ62×30
NCS HS 49702a-3	Aluminium Alloy	0.275	0.358	1.37	0.329	2.19	0.143	0.037	5.15	0.037	0.106		Φ62×30
NCS HS 49702a-4	Aluminium Alloy	0.168	0.584	2.09	0.664	1.40	0.262	0.128	2.83	0.156	0.154		Φ62×30
NCS HS 49702a-5	Aluminium Alloy	0.078	0.430	1.54	0.819	0.274	0.367	0.205	8.3	0.0061	0.0085		Φ62×30
NCS HS 49702a-6	Aluminium Alloy	0.756	0.770	2.88	0.066	4.07	0.129	0.015	1.27	0.260	0.203		Φ62×30
Number	Name	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti			Unit Size (mm)
NCS HS 49703b-1	Aluminium Alloy	0.526	0.212	0.035	0.864	1.16	0.085	0.059	0.294	0.108			Φ62×30
NCS HS 49703b-2	Aluminium Alloy	1	0.344	0.237	0.507	0.658	0.144	0.042	0.217	0.049			Φ62×30
NCS HS 49703b-3	Aluminium Alloy	1.28	0.432	0.522	0.234	0.911	0.340	0.030	0.091	0.028			Φ62×30
NCS HS 49703b-4	Aluminium Alloy	0.224	0.652	0.730	1.17	0.442	0.232	0.094	0.162	0.072			Φ62×30
NCS HS 49703b-5	Aluminium Alloy	1.59	0.822	0.011	1.48	0.081	0.311	0.120	0.040	0.0094			Φ62×30
NCS HS 49703b-6	Aluminium Alloy	0.048	0.099	0.990	0.043	1.50	0.043	0.016	0.367	0.160			Φ62×30
Number	Name	Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb			Unit Size (mm)
NCS HS 49704b-1	Aluminium Alloy	0.588	0.671	0.184	0.851	0.0097	0.024	0.028	0.018	0.0043			Φ62×30
NCS HS 49704b-2	Aluminium Alloy	0.423	0.537	0.097	1.20	0.032	0.049	0.114	0.032	0.0027*			Φ62×30
NCS HS 49704b-3	Aluminium Alloy	0.287	0.313	0.129	1.52	0.052	0.075	0.047	0.06	0.0067			Φ62×30
NCS HS 49704b-4	Aluminium Alloy	0.145	0.242	0.057	1.93	0.073	0.109	0.081	0.088	0.017			Φ62×30
NCS HS 49704b-5	Aluminium Alloy	0.695	0.803	0.228	0.544	0.101	0.152	0.165	0.123	0.019			Φ62×30
NCS HS 49704b-6	Aluminium Alloy	0.05	0.149	0.0063	2.38	0.006	0.0046	0.017	0.01	0.0011			Φ62×30
Number	Name	Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn				Unit Size (mm)
NCS HS 49705-1	LD7	0.454	0.904	0.095	0.428	1.55	4.51	0.021	0.140				Φ62×30
NCS HS 49705-2	LD7	1.21	0.657	0.138	1.37	1.12	2.51	0.088	0.238				Φ62×30
NCS HS 49705-3	LD7	0.900	1.22	0.239	0.897	2.02	1.51	0.120	0.334				Φ62×30
NCS HS 49705-4	LD7	1.61	0.371	0.184	1.80	0.624	3.33	0.055	0.166				Φ62×30
NCS HS 49705-5	LD7	1.87	1.53	0.287	2.26	0.153	0.927	0.161	0.367				Φ62×30
NCS HS 49705-6	LD7	0.115	0.090	0.054	0.074	2.25	5.55	0.00095	0.084				Φ62×30
Number	Name	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Na		Unit Size (mm)
NCS HS 49706a-1	Aluminium Alloy	0.238	0.202	0.045	0.168	3.95	0.252	0.038	0.098	0.300*	0.0028*		Φ62×30
NCS HS 49706a-2	Aluminium Alloy	0.462	0.340	0.101	0.327	2.24	0.219	0.233	0.052	0.046	0.00011		Φ62×30
NCS HS 49706a-3	Aluminium Alloy	0.702	0.444	0.153	0.495	2.90	0.123	0.071	0.143	0.149	0.0011		Φ62×30
NCS HS 49706a-4	Aluminium Alloy	0.788	0.624	0.184	0.677	1.39	0.314	0.097	0.235	0.188	0.00014		Φ62×30
NCS HS 49706a-5	Aluminium Alloy	0.102	0.093	0.0085	0.051	5.09	0.042	0.011	0.030	0.019			Φ62×30
NCS HS 49706a-6	Aluminium Alloy	0.898	0.684	0.21	0.826	0.611	0.359	0.122	0.306	0.215			Φ62×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Si	Fe	Cu	Mn	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 49707a-1	Aluminium Alloy	0.195	0.301	0.167	0.137	8.46	0.106	0.164	0.118	0.142	0.0033	Φ62×30
NCS HS 49707a-2	Aluminium Alloy	0.304	0.364	0.090	0.366	5.33	0.192	0.060	0.225	0.044	0.0028	Φ62×30
NCS HS 49707a-3	Aluminium Alloy	0.377	0.458	0.128	0.526	6.38	0.140	0.089	0.156	0.116	0.0068	Φ62×30
NCS HS 49707a-4	Aluminium Alloy	0.459	0.584	0.229	0.677	7.04	0.246	0.169	0.586	0.087	0.0011	Φ62×30
NCS HS 49707a-5	Aluminium Alloy	0.078	0.134	0.0074	0.065	10.14	0.0123	0.146	0.038	0.0070	0.0087	Φ62×30
NCS HS 49707a-6	Aluminium Alloy	0.600	0.696	0.243	0.865	3.76	0.273	0.035	0.285	0.192	0.00056	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 49708a-1	Aluminium Alloy	0.448	0.690	2.14	0.341	2.15	0.111	0.054	0.088			Φ62×30
NCS HS 49708a-2	Aluminium Alloy	0.525	0.453	3.25	1.00	0.737	0.021	0.134	0.017			Φ62×30
NCS HS 49708a-3	Aluminium Alloy	0.127	0.350	4.11	0.532	1.51	0.037	0.147	0.039			Φ62×30
NCS HS 49708a-4	Aluminium Alloy	0.230	0.213	5.82	0.240	0.950	0.057	0.320	0.181			Φ62×30
NCS HS 49708a-5	Aluminium Alloy	0.103	0.772	1.21	0.084	2.64	0.210	0.712	0.013			Φ62×30
Number	Name	Fe	Si	Mn	Mg	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 49709-1	XZL	0.504	10.89	0.252	1.35	1.33	0.624	0.080	0.209	0.020	0.016	Φ62×30
NCS HS 49709-2	XZL	0.216	11.35	0.614	0.843	0.827	0.930	0.115	0.165	0.120	0.136	Φ62×30
NCS HS 49709-3	XZL		7.08		1.14	1.00	1.13	0.056	0.098	0.0085	0.039	Φ62×30
NCS HS 49709-4	XZL	0.310	12.48	0.790	0.801	0.623	1.27	0.139	0.133	0.012	0.031	Φ62×30
NCS HS 49709-5	XZL	0.082	8.69	0.094	1.55	1.59	0.410	0.021	0.251	0.018	0.0025	Φ62×30
NCS HS 49709-6	XZL		14.56		0.513	0.353	1.46	0.179	0.049	0.013	0.043	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 49710d-1	Pure Aluminum	0.168	0.137	0.010	0.010	0.0074	0.0051	0.017	0.011	0.012		Φ62×30
NCS HS 49710d-2	Pure Aluminum	0.052	0.058	0.0052	0.0030	0.0027	0.0036	0.0044	0.0010	0.0034		Φ62×30
NCS HS 49710d-3	Pure Aluminum	1.18	1.20	0.093	0.054	0.068	0.033	0.083	0.037	0.020		Φ62×30
NCS HS 49710d-4	Pure Aluminum	0.363	0.334	0.035	0.025	0.025	0.052	0.045	0.018	0.029		Φ62×30
NCS HS 49710d-5	Pure Aluminum	0.577	0.709	0.051	0.091	0.043	0.089	0.136	0.086	0.040		Φ62×30
NCS HS 49710d-6	Pure Aluminum	0.913	0.920	0.028	0.205	0.143	0.114	0.188	0.064	0.050		Φ62×30
Number	Name	Fe	Si	Mn	Mg	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 49711-1	LY11	0.825	1.25	1.24	0.692	0.092	0.161	1.88	(0.121)	0.401	(0.191)	Φ62×30
NCS HS 49711-2	LY11	0.657	0.893	0.932	0.298	0.223	0.113	2.89	(0.169)	0.343	(0.250)	Φ62×30
NCS HS 49711-3	LY11	0.427	0.552	0.561	0.481	0.157	0.045	4.03	0.047	0.236	0.137	Φ62×30
NCS HS 49711-4	LY11	0.188	0.236	0.241	(0.108)	0.193	0.089	5.47	0.078	0.125	0.048	Φ62×30
NCS HS 49711-5	LY11	(1.08)	1.59	(1.54)	(0.922)	(0.311)	(0.220)	0.658	(0.225)	0.051	0.0064	Φ62×30
NCS HS 49711-6	LY11	0.122	0.101	(0.071)	0.035	0.011	0.0095	6.61	(0.108)	(0.566)	(0.319)	Φ62×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Mg	Mn	Fe	Cu	Zn	Ni	Cr	Ti	Zr	Ga	
NCS HS 49715a-1	Aluminum Concentrate	0.00098	0.0025	0.00007	0.00083	0.00088	0.00040	0.00025	0.00053	0.00011	(0.00026)		Φ40×35
NCS HS 49715a-2	Aluminum Concentrate	0.0015	0.00039	0.0019	0.0016	0.00017	0.0025	0.0026	0.00097	0.00084	0.0025	0.0032	Φ40×35
NCS HS 49715a-3	Aluminum Concentrate	0.010	0.0079	0.0066	0.012	0.0061	0.0073	0.0063	0.0040	0.0030	0.0053	0.0082	Φ40×35
NCS HS 49715a-4	Aluminum Concentrate	0.031	0.0092	0.010	0.033	0.012	0.011	0.011	0.0069	0.012	0.014	0.011	Φ40×35
NCS HS 49715a-5	Aluminum Concentrate	0.0073	0.0052	0.0041	0.0091	0.0033	0.0047	0.0059	0.0018	0.0021	0.0057	0.0012	Φ40×35
NCS HS 49715a-6	Aluminum Concentrate	0.044	0.014	0.012	0.063	0.014	0.016	0.042	0.015	0.017	0.019	0.015	Φ40×35
NCS HS 49715a-7	Aluminum Concentrate	0.111	0.0022	0.0030	0.397	0.0020				0.012			Φ40×35
Number	Name	Si	Mg	Mn	Fe	Cu	Zn	Sn	Pb	Ni	Ti	Sr	Unit Size (mm)
NCS HS 49716b-1	ADC12	7.53	0.478	0.702	0.665	0.505	3.04	0.096	0.011	0.152	0.018	0.0021	Φ62×30
NCS HS 49716b-2	ADC12	8.87	0.145	0.558	1.33	3.35	0.794	0.129	0.028	0.266	0.0093	0.0053	Φ62×30
NCS HS 49716b-3	ADC12	10.79	0.211	0.363	1.01	2.58	1.25	0.197	0.056	0.318	0.045	0.111	Φ62×30
NCS HS 49716b-4	ADC12	11.98	0.294	0.265	0.855	1.95	1.89	0.242	0.076	0.473	0.013	0.038	Φ62×30
NCS HS 49716b-5	ADC12	13.82	0.392	0.108	0.289	1.19	2.42	0.310	0.129	0.647	0.020	0.029	Φ62×30
NCS HS 49716b-6	ADC12	6.27	0.064	0.052	1.92	4.21	0.330	0.054	0.0041	0.079	0.0060	0.0002	Φ62×30
Number	Name	Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	V	Pb	Sn	Unit Size (mm)
NCS HS 49717-1	DL18	0.0026	0.0032	0.0006	0.062	0.051	0.0016	0.0095	0.0026	0.0002	0.0046	(0.0001)	Φ62×30
NCS HS 49717-2	DL18	0.015	0.011	0.017	0.193	0.194	0.030	0.036	0.014	0.237		0.171	Φ62×30
NCS HS 49717-3	DL18	0.031	0.031	0.034	0.371	0.344	0.067	0.013	0.030		0.123		Φ62×30
NCS HS 49717-4	DL18	0.104	0.093	0.046	0.940	0.933	0.096	0.054	0.050	0.121		0.119	Φ62×30
NCS HS 49717-5	DL18	0.076	(0.056)	0.108	0.612	0.634	1.05	0.081	0.075		0.066		Φ62×30
NCS HS 49717-6	DL18	0.134	0.127	0.142	0.748	0.789	0.522	0.114	0.104	0.027		0.071	Φ62×30
NCS HS 49717-7	DL18	0.048	0.021	0.070	0.505	0.491	1.50	(0.138)	0.133		0.0052		Φ62×30
		Sb	Ga	Cd	Ca	B	Ce	Nd					
NCS HS 49717-1	DL18	(0.0004)	(0.00024)	(0.0008)	(0.00005)	(0.0014)	0.00031	0.0002					
NCS HS 49717-2	DL18	0.040		0.105									
NCS HS 49717-4	DL18	0.043		0.048									
NCS HS 49717-5	DL18		0.0085		(0.0047)	0.0080							
NCS HS 49717-6	DL18	0.097		0.011									
NCS HS 49717-7	DL18		0.032										
Number	Name	Si	Fe	Cu	Mn	Mg	Zn	Ti	Pb	Sn	Be	Zr	Unit Size (mm)
NCS HS 49718-1	Aluminium Alloy	6.03	0.194	0.303	0.411	0.095	0.375	0.008	0.020	0.011	0.0086	0.047	Φ62×30
NCS HS 49718-2	Aluminium Alloy	6.36	0.413	0.254	0.317	0.207	0.257	0.188	0.031	0.021	0.013	0.085	Φ62×30
NCS HS 49718-3	Aluminium Alloy	7.15	0.654	0.412	0.248	0.301	0.225	0.132	0.063	0.031	0.017	0.162	Φ62×30
NCS HS 49718-4	Aluminium Alloy	7.55	0.911	0.158	0.165	0.401	0.061	0.088	0.088	0.048	0.024	0.191	Φ62×30
NCS HS 49718-5	Aluminium Alloy	8.19	1012	0.065	0.070	0.501	0.0068	0.043	0.123	0.061	0.055	0.174	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Ni	Unit Size (mm)		
NCS HS 49719-1	Aluminium Alloy	0.352	0.098	0.099	0.094	0.745	0.374	0.088	0.046	0.011	Φ62×30		
NCS HS 49719-2	Aluminium Alloy	0.547	0.215	0.200	0.198	0.580	0.275	0.126	0.092	0.042	Φ62×30		
NCS HS 49719-3	Aluminium Alloy	0.654	0.294	0.328	0.289	0.647	0.236	0.181	0.109	0.062	Φ62×30		
NCS HS 49719-4	Aluminium Alloy	0.794	0.411	0.435	0.410	0.395	0.145	0.223	0.142	0.100	Φ62×30		
NCS HS 49719-5	Aluminium Alloy	0.972	0.517	0.540	0.539	0.277	0.072	0.277	0.173	0.138	Φ62×30		

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cr	Zr		
NCS HS 49720-1	Aluminium Alkly	0.044	0.122	0.015	0.095	0.842	5.78	0.010	0.011	0.021	0.067	Φ62×30	
NCS HS 49720-2	Aluminium Alkly	0.115	0.206	0.041	0.243	1.16	5.20	0.019	0.039	0.077	0.104	Φ62×30	
NCS HS 49720-3	Aluminium Alkly	0.177	0.312	0.086	0.397	1.35	4.41	0.035	0.067	0.119	0.138	Φ62×30	
NCS HS 49720-4	Aluminium Alkly	0.284	0.396	0.116	0.556	1.94	3.50	0.059	0.099	0.179	0.204	Φ62×30	
NCS HS 49720-5	Aluminium Alkly	0.401	0.481	0.119	0.719	1.76	2.78	0.073	0.145	0.222	0.235	Φ62×30	
Number	Name	Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni			Unit Size (mm)	
NCS HS 49726-1	Aluminium Alloy	0.027	0.034	0.0025	0.0017	1.20	0.0072	0.0090	0.0093			Φ62×30	
NCS HS 49726-2	Aluminium Alloy	0.0033	0.0097	0.0065	0.0017	1.88	0.013	0.00084	0.00088			Φ62×30	
NCS HS 49726-3	Aluminium Alloy	0.0073	0.012	0.0038	0.0042	1.63	0.0047	0.0042	0.0036			Φ62×30	
NCS HS 49726-4	Aluminium Alloy	0.013	0.027	0.011	0.011	2.10	0.0012	0.011	0.0098			Φ62×30	
NCS HS 49726-5	Aluminium Alloy	0.015	0.0040	0.012	0.0013	2.13	0.0024	0.00060	0.00028			Φ62×30	
Number	Name	Pb	Cd	As	Cu	Chemical Composition(Percent)						Unit Size (mm)	
NCS HS 49727-1	Aluminium Alloy	0.0022	0.0038	0.017	0.082**							Φ62×30	
NCS HS 49727-2	Aluminium Alloy	0.011	0.019		0.469**							Φ62×30	
NCS HS 49727-3	Aluminium Alloy	0.029	0.010	0.038	0.284**							Φ62×30	
NCS HS 49727-4	Aluminium Alloy	0.019	0.027	0.011	0.080**							Φ62×30	
NCS HS 49727-5	Aluminium Alloy			0.0057								Φ62×30	
NCS HS 49727-6	Aluminium Alloy			0.024								Φ62×30	
Number	Name	Si%	Fe%	Cu%	Mn%	Mg%	Ni%	Zn%	Ti%	Be ppm	Li ppm	Cd ppm	Unit Size (mm)
NCS HS 49728-1	Aluminium Alloy	0.044	0.108	0.066	0.017	0.0030	0.0082	0.012	0.0054	0.79	0.53	8.4	Φ62×30
NCS HS 49728-2	Aluminium Alloy	0.104	0.359	0.042	0.020	0.0016	0.046	0.029	0.018	3.0	1.6	45	Φ62×30
NCS HS 49728-3	Aluminium Alloy	0.375	0.480	0.0080	0.080	0.011	0.070	0.087	0.038	3.2	2.0	80	Φ62×30
NCS HS 49728-4	Aluminium Alloy	0.594	0.665	0.072	0.032	0.036	0.095	0.027	0.031	20	8.8	67	Φ62×30
NCS HS 49728-5	Aluminium Alloy	0.772	0.828	0.072	0.0066	0.029	0.110	0.050	0.011	12	55	97	Φ62×30
NCS HS 49728-6	Aluminium Alloy	0.650	0.478	0.100	0.033	0.0086	0.098	0.030	0.028	7.8	4.2	42	Φ62×30
NCS HS 49728-7	Aluminium Alloy	1.03	0.932	0.111	0.096	0.046	0.118	0.079	0.075	26	48	223	Φ62×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)						Unit Size (mm)
		Ga	Li	Cd	B	Co	Mg	
NCS HS 49732-1	Aluminium Alloy	0.018	0.0054	0.0045	0.0058	0.0052	1.04	Φ62×30
NCS HS 49732-2	Aluminium Alloy	—	0.00012	0.00022*	0.0010	—	1.09	Φ62×30
NCS HS 49732-3	Aluminium Alloy	0.0093	0.00058	0.00023	0.0011	0.00025	0.092	Φ62×30
NCS HS 49732-4	Aluminium Alloy	0.0097	0.039	0.019	0.0032	0.0037	0.106	Φ62×30
NCS HS 49732-5	Aluminium Alloy	0.411	0.00010	0.00012	0.0015	0.00013*	2.67	Φ62×30
NCS HS 49732-6	Aluminium Alloy	0.069	0.0042	0.052	0.00067	0.0098	0.629	Φ62×30
NCS HS 49732-7	Aluminium Alloy	0.040	0.0023	0.0015	0.0040	0.0111	2.01	Φ62×30
Number	Name	Chemical Composition(Percent)						Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Zn	
NCS HS 49733-1	Aluminium Alloy	0.358	0.455	4.76	0.476	0.0020	0.007*	Φ62×30
NCS HS 49733-2	Aluminium Alloy	0.257	0.380	5.53	0.387	0.021	0.049	Φ62×30
NCS HS 49733-3	Aluminium Alloy	0.198	0.302	6.21	0.318	0.040	0.105	Φ62×30
NCS HS 49733-4	Aluminium Alloy	0.159	0.199	6.64	0.161	0.062	0.157	Φ62×30
NCS HS 49733-5	Aluminium Alloy	0.106	0.105	6.97	0.090	0.126	0.189	Φ62×30
Number	Name	Chemical Composition(Percent)						Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Ni	
NCS HS 49734-1	Aluminium Alloy	0.246	0.361	0.013	1.11	4.85	0.013	Φ45×30
NCS HS 49734-2	Aluminium Alloy	0.206	0.273	0.051	0.849	6.28	0.014	Φ45×30
NCS HS 49734-3	Aluminium Alloy	0.131	0.197	0.029	0.413	5.61	0.0097	Φ45×30
NCS HS 49734-4	Aluminium Alloy	0.050	0.155	0.072	0.140	7.11	0.035	Φ45×30
NCS HS 49734-5	Aluminium Alloy	0.100	0.299	0.097	0.783	7.30	0.108	Φ45×30
NCS HS 49734-6	Aluminium Alloy	0.049	0.089	0.012	0.341	5.19	0.0066	Φ45×30
NCS HS 49734-7	Aluminium Alloy	0.046	0.089	0.011	0.306	4.52	0.0058	Φ45×30
Number	Name	Chemical Composition(Percent)						Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Ni	
NCS HS 49736-1	Aluminium Alloy	0.658	0.847	0.030	0.687	1.39	0.052	Φ62×30
NCS HS 49736-2	Aluminium Alloy	0.488	0.664	0.111	0.795	1.19	0.109	Φ62×30
NCS HS 49736-3	Aluminium Alloy	0.194	0.497	0.203	0.957	1.16	0.206	Φ62×30
NCS HS 49736-4	Aluminium Alloy	0.342	0.332	0.380	1.05	0.869	0.271	Φ62×30
NCS HS 49736-5	Aluminium Alloy	0.056	0.209	0.298	1.18	0.712	0.330	Φ62×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Ti	Cd	Na	
NCS HS 49737-1	Aluminium Alloy	0.039	0.091	0.019	0.092	5.94	0.010	0.0070	0.327	0.0011	0.011	0.00011	0.00020	Φ62×30
NCS HS 49737-2	Aluminium Alloy	0.086	0.238	0.168	0.478	5.16	0.110	0.022	0.258	0.0075	0.129	0.0068	0.00076	Φ62×30
NCS HS 49737-3	Aluminium Alloy	0.138	0.314	0.072	0.370	4.56	0.067	0.044	0.197	0.0068	0.074	0.0053	0.0014	Φ62×30
NCS HS 49737-4	Aluminium Alloy	0.214	0.397	0.105	0.221	3.76	0.173	0.067	0.105	0.015	0.175	0.0087	0.0010*	Φ62×30
NCS HS 49737-5	Aluminium Alloy	0.296	0.471	0.209	0.601	2.94	0.220	0.107	0.050	0.023	0.235	0.019	0.00039*	Φ62×30
NCS HS 49737-6	Aluminium Alloy	0.116	0.284	0.056	0.342	4.25	0.041	0.022	0.055	0.0034	0.041	0.0011	0.00013	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(Percent)							Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Ca	Na	
NCS HS 49738-1	Aluminium Alloy	0.147	0.283	1.83	0.043	3.17	0.0026	0.0043	7.24	0.014	0.019	0.00048	0.00070	Φ62×30
NCS HS 49738-2	Aluminium Alloy	0.130	0.239	2.17	0.110	2.75	0.036	0.037	6.42	0.050	0.092	0.0023	0.0027	Φ62×30
NCS HS 49738-3	Aluminium Alloy	0.082	0.184	2.95	0.147	2.11	0.059	0.062	5.35	0.086	0.162	0.00023	0.00077*	Φ62×30
NCS HS 49738-4	Aluminium Alloy	0.019	0.041	3.48	0.207	1.88	0.101	0.104	4.60	0.134	0.198	0.0010	0.00014	Φ62×30
NCS HS 49738-5	Aluminium Alloy	0.055	0.113	2.43	0.254	1.40	0.130	0.133	3.95	0.164	0.207	0.0012	0.0011	Φ62×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(Percent)							Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Zn	Pb	Sn	Ti	Zr	Be		
NCS HS 49741-1	Aluminium Alloy	4.36	0.475	2.52	0.0187	0.163	0.010	0.0090	0.0063*	0.041	0.181	0.0047		Φ62×30
NCS HS 49741-2	Aluminium Alloy	3.69	0.364	2.01	0.134	0.317	0.067	0.029	0.017	0.118	0.172	0.021		Φ62×30
NCS HS 49741-3	Aluminium Alloy	4.89	0.294	1.45	0.245	0.421	0.151	0.051	0.019	0.154	0.107	0.011		Φ62×30
NCS HS 49741-4	Aluminium Alloy	5.05	0.186	1.02	0.347	0.600	0.201	0.088	0.014*	0.175	0.137	0.014		Φ62×30
NCS HS 49741-5	Aluminium Alloy	5.67	0.110	0.514	0.497	0.686	0.305	0.142	0.022	0.234	0.040	0.014		Φ62×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(%)							Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr			
NCS HS49755-1	Aluminum Alloy	0.035	0.099	1.64	0.032	1.27	0.0053	0.0077	7.55	0.0098	0.05			Φ55×30
NCS HS49755-2	Aluminum Alloy	0.076	0.037	1.29	0.015	1.53	0.023	0.032	7.03	0.031	0.1			Φ55×30
NCS HS49755-3	Aluminum Alloy	0.121	0.165	0.951	0.053	1.79	0.046	0.051	6.57	0.053	0.169			Φ55×30
NCS HS49755-4	Aluminum Alloy	0.165	0.231	0.631	0.08	2	0.061	0.111	6.03	0.075	0.202			Φ55×30
NCS HS49755-5	Aluminum Alloy	0.194	0.073	0.337	0.114	2.28	0.093	0.076	6.34	0.103	0.257			Φ55×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(%)							Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Zr	Er			
NCS HS49756-1	Aluminum Alloy	0.095	0.157	0.926	0.066	1.73	0.047	7.45	0.083	0.157	0.098			Φ55×30
NCS HS49756-2	Aluminum Alloy	0.052	0.087	0.562	0.356	2.65	0.03	7.7	0.031	0.155	0.177			Φ55×30
NCS HS49756-3	Aluminum Alloy	0.037	0.119	1.18	0.097	2.34	0.0062	5.98	0.029	0.066	0.092			Φ55×30
NCS HS49756-4	Aluminum Alloy	0.064	0.067	1.56	0.179	2.88	0.094	6.7	0.0074	0.052	0.243			Φ55×30
NCS HS49756-5	Aluminum Alloy	0.017	0.025	2.21	0.019	3.66	0.012	4.41	0.0015	0.011	0.323			Φ55×30
NCS HS49756-6	Aluminum Alloy	0.138	0.255	0.275	0.601	1.38	0.152	8.96	0.115	0.225	0.026			Φ55×30
Number	Name	Si	Fe	Cu	Mn	Chemical Composition(%)							Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Ga	Pb	Bi		
NCS HS49757-1	Aluminum Alloy	0.0042	0.01	0.0087	0.0011	0.0087	0.0019	0.01	0.0018	0.0092	0.047	0.539		ø62×30
NCS HS49757-2	Aluminum Alloy	0.0032	0.0014	0.0031	0.00017	0.013	0.00039	0.014	0.00021	0.02	0.148	0.352		ø62×30
NCS HS49757-3	Aluminum Alloy	0.0063	0.01	0.0046	0.0028	0.0066	0.0088	0.007	0.0068	0.029	0.241	0.264		ø62×30
NCS HS49757-4	Aluminum Alloy	0.012	0.016	0.0074	0.0086	0.0049	0.006	0.0044	0.0098	0.038	0.338	0.168		ø62×30
NCS HS49757-5	Aluminum Alloy	0.019	0.023	0.013	0.015	0.0017	0.013	0.00083	0.017	0.052	0.457	0.038		ø62×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		Si	Fe	Cu	Mn	Mg	Zn	Ni	Pb	Sn					
NCS HS 49744-1	Aluminium Alloy	6.78	0.166	4.64	0.531	0.063	0.097	0.024				Φ62×30			
NCS HS 49744-2	Aluminium Alloy	7.55	0.443	4.00	0.451	0.124	0.374	0.024	0.0059	0.043		Φ62×30			
NCS HS 49744-3	Aluminium Alloy	8.54	0.706	3.31	0.326	0.172	0.736	0.244	0.019	0.072		Φ62×30			
NCS HS 49744-4	Aluminium Alloy	9.10	0.998	2.92	0.204	0.239	0.977	0.414	0.065	0.113		Φ62×30			
NCS HS 49744-5	Aluminium Alloy	9.99	1.32	2.49	0.099	0.292	1.08	0.515	0.112	0.146		Φ62×30			
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb		Sn	Sr	Ca
NCS HS 49745-1	Aluminium Alloy	5.45	0.064	0.063	0.010	0.617	0.012	0.0014	0.146	0.0083	0.012	0.097	0.016	0.065	Φ62×30
NCS HS 49745-2	Aluminium Alloy	5.94	0.214	0.0074	0.056	0.500	0.070	0.0053	0.069	0.049	0.073	0.014	0.144*	0.036	Φ62×30
NCS HS 49745-3	Aluminium Alloy	7.63	0.049	0.098	0.160	0.426	0.0081	0.016	0.0091	0.018	0.0060	0.0058	0.031	0.0083	Φ62×30
NCS HS 49745-4	Aluminium Alloy	6.93	0.108	0.015	0.075	0.096	0.051	0.0065	0.098	0.148	0.100	0.088	0.101	0.017	Φ62×30
NCS HS 49745-5	Aluminium Alloy	6.62	0.220	0.042	0.117	0.198	0.030	0.029	0.039	0.179	0.027	0.046	0.067	0.0077	Φ62×30
NCS HS 49745-6	Aluminium Alloy	8.62	0.278	0.027	0.109	0.313	0.040	0.020	0.034	0.105	0.045	0.033	0.0033*	0.0021	Φ62×30
Number	Name	Chemical Composition(Percent)							Unit Size (mm)						
		Fe	Si	Mn	Ni	Cu	Al	Zn							
NCS HS 50704-1	ZLD202	0.15	0.37	1.21	1.27	10.00	margin	0.49							50×40×30
NCS HS 50704-2	ZLD202	0.49	0.26	0.51	0.38	10.00	margin	1.70							50×40×30
NCS HS 50704-3	ZLD202	0.99	1.00	0.21	0.78	10.00	margin	0.17							50×40×30
NCS HS 50704-4	ZLD202	0.29	1.70	0.77	0.15	10.00	margin	0.28							50×40×30
NCS HS 50704-5	ZLD202	1.38	0.67	0.33	0.24	10.00	margin	0.91							50×40×30
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Al	Zn	Sn	Pb				
NCS HS 50705-1	ZLD110	1.16	3.25	0.12	0.13	0.068	8.48	margin	0.124	0.0080	0.099				30×35×50
NCS HS 50705-2	ZLD110	0.81	4.13	0.15	0.25	0.48	7.19	margin	0.18	0.0052	0.018				30×35×50
NCS HS 50705-3	ZLD110	1.30	5.13	0.73	0.39	0.176	5.89	margin	0.69	0.017	0.071				30×35×50
NCS HS 50705-4	ZLD110	0.50	6.21	0.46	0.58	0.30	4.81	margin	0.44	0.011	0.042				30×35×50
NCS HS 50705-5	ZLD110	0.21	7.84	0.26	0.89	0.125	3.97	margin	0.26	0.028	0.028				30×35×50
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn		Pb		
NCS HS 50707-1	ZLD109	0.17	14.06	0.078	0.64	0.62	0.34	margin	0.11	0.12	0.044	0.037			30×35×50
NCS HS 50707-2	ZLD109	0.24	12.35	0.43	0.83	0.86	0.57	margin	0.14	0.43	0.0064	0.089			30×35×50
NCS HS 50707-3	ZLD109	0.39	11.61	0.21	1.19	1.00	0.82	margin	0.19	0.19	0.016	0.058			30×35×50
NCS HS 50707-4	ZLD109	0.58	10.64	0.28	1.28	1.58	1.18	margin	0.26	0.37	0.0074	0.14			30×35×50
NCS HS 50707-5	ZLD109	0.91	9.25	0.12	1.95	2.04	1.91	margin	0.049	0.050	0.031	0.21			30×35×50
Number	Name	Chemical Composition(Percent)										Unit Size (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn		Pb		
NCS HS 50708-1	ZLD108	0.28	14.18	0.24	0.315	0.099	0.70	margin	0.145	0.084	0.0056	0.022			30×35×50
NCS HS 50708-2	ZLD108	0.324	12.61	0.36	1.17	0.19	1.015	margin	0.156	0.235	0.0173	0.034			30×35×50
NCS HS 50708-3	ZLD108	0.406	11.49	0.48	0.86	0.317	1.42	margin	0.18	0.106	0.011	0.052			30×35×50
NCS HS 50708-4	ZLD108	0.90	9.97	0.644	0.655	0.42	1.77	margin	0.105	0.133	0.021	0.071			30×35×50
NCS HS 50708-5	ZLD108	0.62	8.88	0.98	0.43	0.607	2.40	margin		0.487	0.038	0.12			30×35×50

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Cu	Mg	Mn	Fe	Si	Zn	Sn			
NCS HS 50709a-1	ZLD101	0.086	0.090	0.091	0.29	11.93	0.14				35×35×40
NCS HS 50709a-2	ZLD101	0.18	0.17	0.44	0.78	9.01	0.17	0.0075			35×35×40
NCS HS 50709a-3	ZLD101	0.48	0.074		0.17	9.99	0.30	0.012			35×35×40
NCS HS 50709a-4	ZLD101	0.29	0.31	0.24	1.12	6.28	0.10	0.0041			35×35×40
NCS HS 50709a-5	ZLD101	0.82	0.48	0.7	0.42	5.32	0.50	0.019			35×35×40
Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Fe	Si	Mn	Mg	Cu	Al	Zn		Sn	Pb
NCS HS 50710-1	ZLD203		2.05	0.052	0.017	4.47	margin	0.070	0.006	0.020	30×35×50
NCS HS 50710-2	ZLD203	0.37	1.44	0.15	0.096	4.47	margin	0.091	0.022	0.025	30×35×50
NCS HS 50710-3	ZLD203	0.31	0.86	0.084	0.018	4.50	margin	0.30	0.014	0.043	30×35×50
NCS HS 50710-4	ZLD203	0.56	0.49	0.25	0.035	4.48	margin	0.16	0.012	0.072	30×35×50
NCS HS 50710-5	ZLD203	0.81	0.34	0.13	0.068	4.45	margin	0.30		0.13	30×35×50
NCS HS 50710-6	ZLD203	0.27	1.32	0.19	0.062	4.56	margin	0.14	0.0095	0.028	30×35×50
Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Fe	Si	Mn	Mg	Cu	Al	Zn			
NCS HS 50711-1	ZLD401	0.43	7.00	0.38	0.10	0.68	margin	11.00			30×35×50
NCS HS 50711-2	ZLD401	0.67	7.00	0.19	0.17	0.89	margin	11.00			30×35×50
NCS HS 50711-3	ZLD401	1.01	7.00	0.28	0.20	0.24	margin	11.00			30×35×50
NCS HS 50711-4	ZLD401	0.24	7.00	0.56	0.40	0.42	margin	11.00			30×35×50
NCS HS 50711-5	ZLD401	0.15	7.00	0.95	0.65	0.15	margin	11.00			30×35×50
Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Cu	Mg	Mn	Fe	Si	Zn				
NCS HS 50712-1	ZLD203	0.28	3.78	0.48	1.00	1.73	0.41				30×35×50
NCS HS 50712-2	ZLD203	0.17	4.34	0.32	0.70	0.85	0.22				30×35×50
NCS HS 50712-3	ZLD203	1.10	5.30	0.172	0.46	1.13	0.164				30×35×50
NCS HS 50712-4	ZLD203	0.055	6.57	0.11	0.29	0.65	0.11				30×35×50
NCS HS 50712-5	ZLD203	0.036	7.68	0.063	0.17	0.48	0.071				30×35×50
Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Si	Mg	Mn	Fe	Cu	Zn	Ni			
NCS HS 50713-1	ZL3	6.50	0.30	0.14	0.12	5.42	0.18	0.088			30×35×40
NCS HS 50713-2	ZL3	5.31	0.52	0.090	0.22	7.30	0.12	0.42			30×35×40
NCS HS 50713-3	ZL3	4.27	0.19	0.23	0.26	9.01	0.59	0.61			30×35×40
NCS HS 50713-4	ZL3	8.27		0.68	0.44	4.30	0.90	0.052			30×35×40
NCS HS 50713-5	ZL3	6.40	0.67	0.42	0.68	6.18	0.37				30×35×40
Number	Name	Chemical Composition(%)							Unit Size (mm)		
		Si	Fe	Cu	Mn	Mg	Ni	Ti		Cr	Zn
NCS HS28712-1	Aluminum Alloy	0.262	0.218	4.78	0.366	1.73	0.0025	0.025	0.001	0.059	Φ 40×30
NCS HS28712-2	Aluminum Alloy	0.4	0.231	4.31	0.665	1.45	0.0025	0.038		0.067	Φ 40×30
NCS HS28712-3	Aluminum Alloy	0.663	0.268	3.63	0.484	1.06	0.0027	0.06		0.085	Φ 40×30
NCS HS28712-4	Aluminum Alloy	1.12	0.34	2.85	0.292	0.544	0.0028	0.106		0.118	Φ 40×30
NCS HS28712-5	Aluminum Alloy	0.91	0.429	2.08	0.521	0.341	0.003	0.152	0.0017	0.186	Φ 40×30

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Sn	Pb	RE	Unit Size (mm)
NCS HS 53703-1	Pure Aluminum	0.071	0.067	0.0077	0.0044	0.0092	0.015	0.012	0.0088				Φ38×32
NCS HS 53703-2	Pure Aluminum	0.166	0.133	0.029	0.017	0.019	0.0093	0.026	0.013				Φ38×32
NCS HS 53703-3	Pure Aluminum	0.59	0.58	0.014	0.022	0.032	0.291	0.041	0.122				Φ38×32
NCS HS 53703-4	Pure Aluminum	0.35	0.29	0.055	0.040	0.054	0.033	0.062	0.035	0.047	0.035	0.029	Φ38×32
NCS HS 53703-5	Pure Aluminum	1.31	1.28	0.112	0.103	0.100	0.079	0.093	0.073				Φ38×32
Number	Name	Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Cr	Be		Unit Size (mm)
NCS HS53704-1	Al Alloy	1.17	0.907	1.04	1.71	0.153	0.222	0.218	0.293	0.130	0.000498		Φ38×32
NCS HS53704-2	Al Alloy	0.392	0.587	0.417	3.41	0.076	0.083	0.100	0.031	0.066	0.000158		Φ38×32
NCS HS53704-3	Al Alloy	0.654	0.379	0.215	4.72	0.102	0.117	0.168	0.178	0.391	0.00528		Φ38×32
NCS HS53704-4	Al Alloy	0.248	0.187	0.742	6.62	0.034	0.033	0.021	0.111	0.022	0.00146		Φ38×32
NCS HS53704-5	Al Alloy	0.122	0.082	0.102	7.81	0.023	0.012	0.060	0.047	0.183	0.00315		Φ38×32
Number	Name	Fe	Si	Zn	Cu	Mg	Mn	Ti	Ga	V	Cr	B	Unit Size (mm)
NCS HS 91701-1	Pure Aluminum	0.055	0.047	0.0081	0.0056	0.0024	0.0019	0.0018	0.0042	0.0012	0.0005	0.0005	Φ60×33
NCS HS 91701-2	Pure Aluminum	0.14	0.11	0.031	0.01	0.022	0.0084	0.0063	0.03	0.0052	0.0015	0.0006	Φ60×33
NCS HS 91701-3	Pure Aluminum	0.773	0.634	0.035	0.03	0.0096	0.017	0.015	0.026	0.0028	0.0048	0.0022	Φ60×33
NCS HS 91701-4	Pure Aluminum	0.325	0.203	0.126	0.058	0.067	0.026	0.029	0.012	0.0047	0.0099	0.0039	Φ60×33
NCS HS 91701-5	Pure Aluminum	0.435	0.347	0.074	0.097	0.038	0.042	0.048	0.05	0.0086	0.015	0.0097	Φ60×33
NCS HS 91701-6	Pure Aluminum	0.744	0.537	0.106	0.147	0.069	0.065	0.079	0.076	0.029	0.025	0.016	Φ60×33
Number	Name	Si	Fe	Cu	Mg	Zn	Mn	Ti	Sn	Pb	Zr	Ni	Unit Size (mm)
NCS HS 11901	Aluminum Alloy	7.18	0.459	0.210	0.43	0.179	0.335	0.123	0.011	0.056	0.117		Φ50×30
NCS HS 11902	Aluminum Alloy	8.24	0.464	1.50	0.52	0.178	0.485	0.225	0.010	0.048		0.012	Φ50×30
Number	Name	Si	Fe	Cu	Mg	Zn	Mn	Ti	Ni	Zr	Sb	Ca	Unit Size (mm)
NCS HS11723-1	Aluminum Alloy	11	0.23	0.0028	0.0025	0.0088	0.005	0.0085	0.004			0.014	D50×35
NCS HS11723-2	Aluminum Alloy	8.52	0.219	0.0016	0.289	0.0074	0.41	0.038	0.0026	0.0023		0.03	D50×35
NCS HS11723-3	Aluminum Alloy	11.82	0.168	1.51	0.76	0.008	0.63	0.0085	0.0043				D50×35
NCS HS11723-4	Aluminum Alloy	7.27	0.124	0.0051	0.6	0.0048	0.0025	0.139	0.0028	0.0013		0.015	D50×35
NCS HS11723-5	Aluminum Alloy	5.15	0.112	0.021	0.64	1.52	0.011	0.088	0.0034		0.14		D50×35
		Ga	Sr	V	Pb	Sn	Be						
NCS HS11723-1	Aluminum Alloy	0.0142	0.04	0.012									
NCS HS11723-2	Aluminum Alloy	0.014	0.034		(0.0008)	<0.001#							
NCS HS11723-3	Aluminum Alloy		0.03	0.012	(0.0008)	<0.001#							
NCS HS11723-4	Aluminum Alloy	0.011		0.0106	(0.0007)	<0.001#	<0.00002#						
NCS HS11723-5	Aluminum Alloy			0.013	(0.0009)	<0.001#							
Number	Name	Si	Mg	Fe	Cu	Mn	Zn	Ni	Ti	Cr	Ga	V	Unit Size (mm)
NCS HS11724-1	Aluminum Alloy	0.62	0.512	0.108	0.0023	0.002	0.0018	0.0026	0.014	0.0019	0.013	0.024	D60×20
NCS HS11724-2	Aluminum Alloy	0.61	0.98	0.125	0.266	0.0032	0.0024	0.0033	0.0088	0.058	0.012	0.022	D60×20
NCS HS11724-3	Aluminum Alloy	0.45	0.568	0.117	0.0037	0.0024	0.0027	0.0035	0.0088	0.0021	0.013	0.018	D60×20
NCS HS11724-4	Aluminum Alloy	0.94	0.881	0.126	0.046	0.479	0.0018	0.005	0.0086	0.126	0.012	0.023	D60×20
NCS HS11794	Aluminum Alloy	0.099	0.0044	0.494	0.071	1.11	0.0022	0.0046	0.026				D50×20

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Fe	Cu	Mg	Mn	Zn	Sn	Pb	Ni	Ti	Cr	
NCS HS28707-1	Aluminum Alloy	5.56	0.026	0.01	0.196	0.085	0.0064	0.0058	0.0053	0.0053	0.024	0.0051	Φ60×30
NCS HS28707-2	Aluminum Alloy	7.22	0.214	0.051	0.288	0.121	0.09	0.084	0.044	0.045	0.043	0.019	Φ60×30
NCS HS28707-3	Aluminum Alloy	6.83	0.068	0.093	0.357	0.049	0.032	0.017	0.014	0.011	0.088	0.01	Φ60×30
NCS HS28707-4	Aluminum Alloy	6.9	0.09	0.139	0.416	0.022	0.098	0.025	0.06	0.029	0.146	0.031	Φ60×30
NCS HS28707-5	Aluminum Alloy	6.26	0.373	0.191	0.497	0.207	0.148	0.036	0.101	0.067	0.153	0.096	Φ60×30
NCS HS28707-6	Aluminum Alloy	7.82	0.483	0.275	0.578	0.307	0.338	0.057	0.138	0.091	0.184	0.108	Φ60×30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Sr	Ca	V	Ga	Zr	Cd	Be	B	P			
NCS HS28707-1	Aluminum Alloy	0.0064	0.0027	0.0049	0.0054	0.0047	0.0013	0.0061		0.0018			
NCS HS28707-2	Aluminum Alloy	0.016	0.0006	0.032	0.059	0.006	0.0061	0.01	0.0006	0.0062			
NCS HS28707-3	Aluminum Alloy	0.043	0.034	0.085	0.011	0.044	0.012	0.022	0.0021	0.0035			
NCS HS28707-4	Aluminum Alloy	0.025	0.0067	0.12	0.021	0.021	0.035	0.034	0.0005	0.0023			
NCS HS28707-5	Aluminum Alloy	0.034	0.017	0.175	0.096	0.072	0.058	0.12		0.0033			
NCS HS28707-6	Aluminum Alloy	0.013	0.0053	0.157	0.2	0.065	0.12	0.21		0.0035			
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Fe	Mn	Cr	Ni	Cu	Mg	Zn	V	Ti	Zr	
NCS HS41762	Aluminium Alloy	0.12	0.15	0.006	0.18	0.004	0.003	2.56	0.008				Φ42×38
NCS HS41763	Aluminium Alloy	0.84	0.2	0.51	0.015	0.01	0.081	0.95	0.066	0.014	0.011		Φ42×32
NCS HS41764	Aluminium Alloy	0.05	0.18	0.04	0.2	0.004	1.57	2.38	5.62		0.024		Φ42×38
NCS HS53721	Aluminium Alloy	0.269	0.271	0.356	0.154	0.051	0.154	1.51	4.89	0.085	0.123	0.191	Φ55×40
NCS HS53722	Aluminium Alloy	0.274	0.397	0.308	0.198	0.042	1.62	2.45	6.24		0.08		Φ55×40
NCS HS93749	Aluminium Alloy	11.82	0.168	0.627		0.0043	1.51	0.76	0.008	0.012	0.0085	0.03	Φ50×35
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Sn	Pb										
NCS HS93749	Aluminium Alloy	<0.001#	(0.0006)										
Number	Name	Chemical Composition(%)											Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Ni	Ti	Cr	Zn	V		
NCS HS28711-1	Aluminum Alloy	0.236	0.22	0.019	0.642	5.91	0.003	0.108	0.05	0.098	0.004		40×35
NCS HS28711-2	Aluminum Alloy	0.349	0.24	0.026	0.555	5.57	0.0035	0.11	0.085	0.049	0.0042		40×35
NCS HS28711-3	Aluminum Alloy	0.877	0.362	0.057	0.471	4.18	0.0053	0.048	0.26	0.103	0.005		40×35
NCS HS28711-4	Aluminum Alloy	0.708	0.448	0.074	0.419	3.54	0.0076	0.0085	0.448	0.146	0.0063		40×35
NCS HS28711-5	Aluminum Alloy	0.576	0.542	0.099	0.374	3.02	0.011	0.0085	0.264	0.192	0.0062		40×35
NCS HS28711-6	Aluminum Alloy	0.461	0.718	0.144	0.292	2.21	0.018	0.009	0.214	0.284	0.0068		40×35
NCS HS28711-7	Aluminum Alloy	0.308	0.845	0.174	0.216	1.62	0.022	0.009	0.117	0.344	0.0071		40×35
NCS HS28711-8	Aluminum Alloy	0.551	0.284	0.04	0.515	4.9	0.004	0.08	0.146	0.08	0.0045		40×35
NCS HS28711-9	Aluminum Alloy	0.173	0.208	0.013	0.725	6.19	0.0026	0.069	0.027	0.093	0.004		40×35
Number	Name	Chemical Composition(%)											Unit Size (mm)
		Si	Fe	Cu	Mg	Mn	Zn	Ga	Ti	Ni	Cr	V	
NCS HS48701a-1	Pure Aluminum	0.011	0.01	0.0026	0.0023	0.0019	0.0023	0.0022	0.0022	0.0011	0.0011	0.0003*	50×30
NCS HS48701a-2	Pure Aluminum	0.13	0.081	0.006	0.007	0.0062	0.0066	0.0063	0.0061	0.0031	0.0032	0.0017	50×30
NCS HS48701a-3	Pure Aluminum	0.21	0.22	0.014	0.014	0.015	0.014	0.014	0.013	0.0073	0.007	0.0047	50×30
NCS HS48701a-4	Pure Aluminum	0.426	0.443	0.025	0.027	0.027	0.026	0.026	0.026	0.013	0.013	0.013	50×30
NCS HS48701a-5	Pure Aluminum	0.82	0.846	0.041	0.042	0.045	0.043	0.042	0.042	0.021	0.021	0.032	50×30
NCS HS48701a-6	Pure Aluminum	1.16	1.2	0.06	0.062	0.066	0.062	0.062	0.062	0.031	0.031	0.054	50×30
Number	Name	Chemical Composition(%)											Unit Size (mm)
		Si	Fe	Mn	Mg	Zn	Ti	Cu	Zr	Sn	Pb		
NCS HS 93751	Aluminum Alloy	7.18	0.458	0.335	0.43	0.179	0.123	0.21	0.117	0.011	0.056		50×30
Number	Name	Chemical Composition(%)											Unit Size (mm)
		Cu	Fe	Mn	Ti	Zr	B	Cd	V				
NCS HS93752	Aluminum Alloy	5.09	0.178	0.356	0.212	0.169	0.023	0.181	0.159				Φ50×33

Section 8 Nonferrous Metal(Disk)

1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(%)												Unit Size (mm)	
		Si	Fe	Cu	Mg	Mn	Zn	Ti	Cr	Ni	Pb	Sn	Cd		
NCS HS48702b-1	Aluminium Alloy	0.102	0.045	0.188	1.01	0.01	0.01	0.153	0.15					50×30	
NCS HS48702b-2	Aluminium Alloy	0.273	0.15	0.149	0.817	0.051	0.047	0.112	0.101					50×30	
NCS HS48702b-3	Aluminium Alloy	0.43	0.24	0.098	0.613	0.098	0.088	0.048	0.05					50×30	
NCS HS48702b-4	Aluminium Alloy	0.569	0.352	0.053	0.39	0.151	0.144	0.0098	0.011					50×30	
NCS HS48702b-5	Aluminium Alloy	0.751	0.459	0.016	0.219	0.207	0.201	0.0042	0.0047					50×30	
NCS HS48728a-1	Aluminium Alloy	1.49	0.14	0.22	1.89	0.81	0.42	0.26	0.21	0.22	0.22	0.18	0.049	40×35	
NCS HS48728a-2	Aluminium Alloy	1	0.41	0.15	3.04	0.61	0.36	0.21	0.15	0.14	0.16	0.14	0.028	40×35	
NCS HS48728a-3	Aluminium Alloy	0.62	0.6	0.094	4.17	0.4	0.26	0.15	0.1	0.099	0.1	0.092	0.023	40×35	
NCS HS48728a-4	Aluminium Alloy	0.31	0.77	0.054	5.24	0.21	0.16	0.11	0.054	0.051	0.052	0.047	0.008	40×35	
NCS HS48728a-5	Aluminium Alloy	0.09	1.18	0.017	6.33	0.058	0.054	0.048	0.014	0.012	0.011	0.011	0.0053	40×35	
NCS HS48757-1	Aluminium Alloy	4.42	0.668	1.73	0.699	0.71	0.386	0.313	0.19	0.252	0.18	0.149		45×35	
NCS HS48757-2	Aluminium Alloy	5.3	0.511	1.15	0.54	0.534	0.312	0.241	0.109	0.175	0.1	0.1		45×35	
NCS HS48757-3	Aluminium Alloy	6.28	0.402	0.579	0.349	0.319	0.219	0.201	0.052	0.103	0.056	0.051		45×35	
NCS HS48757-4	Aluminium Alloy	7.58	0.262	0.358	0.17	0.199	0.12	0.148	0.02	0.052	0.022	0.022		45×35	
NCS HS48757-5	Aluminium Alloy	8.25	0.114	0.114	0.066	0.058	0.055	0.109	0.0088	0.013	0.01	0.0094		45×35	
NCS HS49751-1a	Aluminum-Silicon Alloy	21.61	1.36	0.071	0.398	0.446	0.099	0.022	0.047	0.043	0.025	0.03		55×35	
NCS HS49751-2	Aluminum-Silicon Alloy	17.49	0.808	0.135	0.251	0.326	0.114	0.053	0.055	0.077	0.052	0.061		55×35	
NCS HS49751-3	Aluminum-Silicon Alloy	24.35*	0.789	0.238	0.18	0.215	0.208	0.082	0.096	0.137	0.095	0.084		55×35	
NCS HS49751-4	Aluminum-Silicon Alloy	18.19	0.478	0.191	0.11	0.123	0.264	0.129	0.129	0.154	0.128	0.137		55×35	
NCS HS49751-5	Aluminum-Silicon Alloy	20.87*	0.279	0.188	0.046	0.103	0.34	0.193	0.193	0.228	0.207	0.186		55×35	
		Zr	Be												
NCS HS48757-1	Aluminium Alloy	0.22	0.027												
NCS HS48757-2	Aluminium Alloy	0.138	0.11												
NCS HS48757-3	Aluminium Alloy	0.049	0.096												
NCS HS48757-4	Aluminium Alloy	0.093	0.089												
NCS HS48757-5	Aluminium Alloy	0.013	0.043												
Number	Name	Chemical Composition(%)												Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Na	Be	Zr		
NCS HS 53734	Aluminum Alloy	0.065	0.13	1.69	0.371	2.56	0.153	0.07	5.89	0.047				55×40	
NCS HS 53736	Aluminum Alloy	0.233	0.237	0.115	0.69	4.45	0.174	0.035	0.157	0.101	0.00031	0.00053		55×40	
NCS HS 53737	Aluminum Alloy	0.244	0.229	0.096	0.225	2.47	0.204	0.056	0.114	0.098				55×40	
NCS HS 53739	Aluminum Alloy	0.335	0.335	0.129	0.381	5.15	0.104	0.053	0.166	0.099	0.00029	0.0018		55×40	
NCS HS 53740	Aluminum Alloy	0.176	0.219	0.085	0.64	6.44	0.037	0.042	0.142	0.086	0.00031	0.002		55×40	
NCS HS 53743	Aluminum Alloy	0.19	0.181	6.37	0.296	0.022	0.05	0.035	0.076	0.092			0.134	55×40	
NCS HS 53745	Aluminum Alloy	0.389	0.368	4.71	0.603	1.56	0.05	0.096	0.171	0.095				55×40	
NCS HS 53746	Aluminum Alloy	0.94	0.467	4.36	0.901	0.62	0.05	0.09	0.214	0.095				55×40	
NCS HS 53747	Aluminum Alloy	0.951	0.463	2.18	0.562	0.533	0.09	0.086	0.205	0.102				55×40	
NCS HS 53748	Aluminum Alloy	0.564	0.481	0.178	0.135	0.87	0.2	0.037	0.138	0.098				55×40	
NCS HS 53749	Aluminum Alloy	0.8	0.352	0.091	0.696	0.841	0.197	0.053	0.128	0.08				55×40	
		V													
NCS HS 53743	Aluminum Alloy	0.096													
Number	Name	Chemical Composition(%)												Unit Size (mm)	
		Si	Cu	Mg	Fe	Ti	Zr	Cr	Ni	Zn	Mn	Sn	Pb		Be
NCS HS93705-1	Aluminum Alloy	4.95	1.16	0.67	0.224	0.197	0.081	0.187	0.258	0.388	0.119	0.022	0.07	0.0058	50×30
NCS HS93705-2	Aluminum Alloy	5.37	0.646	0.539	0.681	0.101	0.028	0.139	0.162	0.199	0.342	0.023	0.035	0.0038	50×30
NCS HS93705-3	Aluminum Alloy	6.67	0.17	0.297	0.162	0.031	0.035	0.011	0.0042	0.156	0.691	0.027	0.048	0.019	50×30
NCS HS93705-4	Aluminum Alloy	7.75	0.122	0.089	0.455	0.169	0.119	0.11	0.062	0.09	0.059	0.013	0.029	0.0027	50×30
NCS HS93705-5	Aluminum Alloy	9.21	0.079	0.076	0.212	0.219	0.318	0.092	0.053	0.133	0.091	0.014	0.02	0.031	50×30
NCS HS93705-6	Aluminum Alloy	10.63	0.272	0.089	0.546	0.0042	0.0062	0.039	0.039	0.2	0.25	0.05	0.016	0.0024	50×30

Section 8 Nonferrous Metal(Disk)

2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Fe	P	Zn	Sn	Sb	Pb	Bi	Cu	Ni	Si	Mn	Al	
NCS HS 28703-1	Pb brass	0.028	0.0043	23.99	0.019	0.0036	2.77	0.0009	73	0.003		0.0048		Φ35×28
NCS HS 28703-2	Pb brass	0.036	0.012	33.45	0.32	0.0034	1.87	0.0015	64.43	0.0023	0.0012	0.174	0.015	Φ35×28
NCS HS 28703-3	Pb brass	0.047	0.0042	38.79	0.108	0.0061	0.766	0.0015	60.28	0.0019		0.0046		Φ35×28
NCS HS 28703-4	Pb brass	0.167	0.011	38.85	0.102	0.0077	1.5	0.0024	59.14	0.0027	0.0016	0.031	0.064	Φ35×28
NCS HS 28703-5	Pb brass	0.11	0.02	39.59	0.269	0.013	1.81	0.0025	58.07	0.0025		0.029	0.034	Φ35×28
NCS HS 28703-6	Pb brass	0.037	0.044	41.76	0.478	0.022	0.581	0.001	59.62	0.0023		0.05	0.271	Φ35×28
NCS HS 28703-7	Pb brass	0.502	0.02	34.92	0.75	0.029	3.06	0.0083	59.55	0.0035	0.0077	0.464	0.364	Φ35×28
Number	Name	Fe	P	Zn	Sn	Chemical Composition(Percent)							Unit Size (mm)	
						Sb	Pb	Bi	Cu	Ni	Si	As		
NCS HS 28704-1	Copper alloy	0.288	0.084	39.01	0.0047	0.023	0.318	0.0016	59.89	0.015		0.043		Φ35×28
NCS HS 28704-2	Copper alloy	0.116	0.039	37.53	0.0051	0.0046	0.108	0.0028	61.88	0.0032	0.0029	0.0038		Φ35×28
NCS HS 28704-3	Copper alloy	0.052	0.011	30.44	0.0081	0.0072	0.018	0.0043	69.08	0.006		0.0094		Φ35×28
NCS HS 28704-4	Copper alloy	0.11	0.013	18.75	0.01	0.01	0.017	0.0084	80.9	0.013		0.027		Φ35×28
NCS HS 28704-5	Copper alloy	0.028	0.0052	14.79	0.011	0.0091	0.029	0.0066	85.06	0.0045	0.0019	0.0079		Φ35×28
NCS HS 28704-6	Copper alloy	0.024	0.0071	9.76	0.0010	0.0031	0.0084	0.0054	90.02	0.0045		0.0019		Φ35×28
NCS HS 28704-7	Copper alloy	0.012	0.0046	4.02	0.0010	0.0013	0.0028	0.0019	95.9	0.0047	0.0024	0.0021		Φ35×28
Number	Name	Fe	Si	Mn	P	Chemical Composition(Percent)						Unit Size (mm)		
						Mg	Cu	As	Sb	Pb	Bi			
NCS HS 43708-1	Monel Metal	(2.33)	0.035	1.12	0.011	0.012	(28.64)	0.030	0.0014	0.0021	0.0011			23×28×70
NCS HS 43708-2	Monel Metal	(2.67)	0.0225	1.16	0.0048	0.096	(28.06)	0.0076	0.0018	0.0026	0.0016			23×28×70
NCS HS 43708-3	Monel Metal	(2.48)	0.21	1.53	0.014	0.40	(27.69)	0.049	0.0063		0.0028			23×28×70
NCS HS 43708-4	Monel Metal	(2.42)	0.035	1.31	0.0054	0.042	(27.85)	0.015	0.0040	0.0056	0.0047			23×28×70
NCS HS 43708-5	Monel Metal	(2.42)	0.078	1.58	0.020	0.19	(28.11)	0.0063	0.0026	0.010	0.0079			23×28×70
NCS HS 43708-6	Monel Metal	(2.36)		1.40			(28.29)			0.0013				23×28×70
Number	Name	Fe	Si	Mn	P	Chemical Composition(Percent)						Unit Size (mm)		
						Ni	Zn	Sn	As	Sb	Pb			
NCS HS 43709-1	Silicon Bronze	0.089	(2.83)	(1.21)	0.015	0.075	0.90	0.50	0.0010	0.00104	0.0102			Φ30×57
NCS HS 43709-2	Silicon Bronze	0.16	(3.03)	(1.21)	0.026	0.13	0.55	0.30	0.0017	0.0017	0.017			Φ30×57
NCS HS 43709-3	Silicon Bronze	0.21	(3.04)	(1.24)	0.036	0.18	0.36	0.19	0.0026	0.0025	0.024			Φ30×57
NCS HS 43709-4	Silicon Bronze	0.34	(3.04)	(1.25)	0.56	0.26	0.23	0.12	0.0042	0.0042	0.036			Φ30×57
NCS HS 43709-5	Silicon Bronze	0.56	(2.93)	(1.17)	0.088	0.41	0.16	0.070	0.0068	0.0066	0.059			Φ30×57
Number	Name	Pb	Fe	Bi	Sb	Chemical Composition(%)							Unit Size (mm)	
						As	Sn	Ni	Zn	P	S	Ag	Si	
NCS HS52704a-1	Cathode Copper	0.0001	0.0002	0.00008	0.00008	0.00013	0.00007	0.00012	0.00006	0.00016	0.00054	0.00069	0.00017	38×30
NCS HS52704a-2	Cathode Copper	0.00021	0.0004	0.00018	0.00024	0.00032	0.00027	0.00035	0.0003	0.0003	0.0008	0.0011	0.00056	38×30
NCS HS52704a-3	Cathode Copper	0.0004	0.0006	0.00036	0.00053	0.00054	0.00048	0.00063	0.0005	0.00044	0.001	0.002	0.00074	38×30
NCS HS52704a-4	Cathode Copper	0.0013	0.0011	0.001	0.00097	0.0011	0.001	0.001	0.00097	0.00084	0.0017	0.0026	0.00041	38×30
NCS HS52704a-5	Cathode Copper	0.0025	0.0028	0.0029	0.003	0.0032	0.0029	0.003	0.0028	0.003	0.004	0.0039	0.0028	38×30
		Mn	Cd	Co	Cr	Se	Te							
NCS HS52704a-1	Cathode Copper	0.00005	0.00006	0.00009	0.00007	0.00007	0.00008							
NCS HS52704a-2	Cathode Copper	0.00027	0.00021	0.00031	0.00035	0.00012	0.00012							
NCS HS52704a-3	Cathode Copper	0.0006	0.00013	0.00057	0.00058	0.00032	0.00032							
NCS HS52704a-4	Cathode Copper	0.0014	0.00027	0.0015	0.0012	0.00057	0.00057							
NCS HS52704a-5	Cathode Copper	0.0029	0.0012	0.003	0.0028	0.0012	0.0013							

Section 8 Nonferrous Metal(Disk)

2)Copper & Copper Alloy

Number	Name	Fe	Mn	Al	Chemical Composition(Percent)				Unit Size (mm)					
NCS HS 43712-1	Aluminum Bronze	4.94	2.63	7.76					Φ32×45					
NCS HS 43712-2	Aluminum Bronze	4.17	2.92	8.78					Φ32×45					
NCS HS 43712-3	Aluminum Bronze	3.51	2.01	9.75					Φ32×45					
NCS HS 43712-4	Aluminum Bronze	2.45	1.37	11.75					Φ32×45					
NCS HS 43712-5	Aluminum Bronze	1.63	0.61	10.85					Φ32×45					
Number	Name	Fe	P	Cu	As	Sb	Pb	Bi	Unit Size (mm)					
NCS HS 43714-1	H68,Brass	0.251	0.041	(65.73)	0.016	0.025	0.013	0.0084	Φ32×40					
NCS HS 43714-2	H68,Brass	0.138	0.024	(68.37)	0.046	0.0046	0.028	0.0016	Φ32×40					
NCS HS 43714-3	H68,Brass	0.078	0.012	(67.24)	0.126	0.0084	0.042	0.0030	Φ32×40					
NCS HS 43714-4	H68,Brass	0.041	0.0087	(65.66)	0.078	0.014	0.079	0.0048	Φ32×40					
NCS HS 43714-5	H68,Brass	0.024	0.0054	(68.60)	0.027	0.0025	0.139	0.00073	Φ32×40					
Number	Name	Fe	P	Cu	As	Sb	Pb	Bi	Unit Size (mm)					
NCS HS 43715-1	Brass	0.046	0.0092	60.03		0.016	0.074	0.0049	Φ35×23					
NCS HS 43715-2	Brass	0.018	0.0046	62.40		0.0026	0.132	0.00075	Φ35×23					
NCS HS 43715-3	Brass	0.251	0.041	65.73	0.016	0.025	0.013	0.0088	Φ35×23					
NCS HS 43715-4	Brass	0.153	0.022	68.73	0.048	0.0051	0.028	0.0016	Φ35×23					
NCS HS 43715-5	Brass	0.338	0.013	58.96	0.088	0.011	0.391	0.0030	Φ35×23					
NCS HS 43715-6	Brass	0.473	0.038	71.88	0.129	0.020	0.251	0.0061	Φ35×23					
NCS HS 43715-7	Brass		0.062	55.39			0.563		Φ35×23					
Number	Name	Pb	Fe	Bi	Sb	As	Sn	N1	Zn	P	S	Se	Te	Unit Size (mm)
NCS HS 43716a-1	Pure Copper		0.0022						0.0015	0.02	0.0013	0.0013	0.0016	Φ40×40
NCS HS 43716a-2	Pure Copper	0.0016	0.007	0.0006	0.0021	0.0013	0.00097	0.0025	0.0024	0.0017	0.0021	0.0013	0.0016	Φ40×40
NCS HS 43716a-4	Pure Copper	0.00097	0.0032	0.00095	0.00098	0.0032	0.0037	0.0011	0.0087	0.0088	0.0019			Φ40×40
NCS HS 43716a-5	Pure Copper	0.0079		0.0017	0.0052	0.0052	0.007	0.0118	0.0182	0.0103	0.0050	0.0051	0.0052	Φ40×40
NCS HS 43716a-6	Pure Copper	0.0154	0.0475	0.0059	0.0077	0.0083	0.0142	0.009		0.0222	0.0047	0.0071	0.0082	Φ40×40
NCS HS 43716a-7	Pure Copper	0.0445	0.0652	0.019	0.021	0.025	0.0489	0.0423	0.0443	0.0414	0.0044	0.0109	0.012	Φ40×40
NCS HS 43716a-8	Pure Copper	0.0312	0.0198	0.0093	0.0108	0.0136	0.0183	0.0242	0.0331	0.0299	0.0063	0.007	0.0054	Φ40×40
NCS HS 43716a-9	Pure Copper	0.0558		0.0062	0.0078	0.0139	0.0689	0.0687	0.0247	0.0587	0.0091	0.0104	0.0087	Φ40×40
NCS HS43716a-10	Pure Copper	0.0057	0.142	0.0019		0.0201	0.0592	0.0527	0.0512	0.0336	0.0077			Φ40×40
Number	Name	Cu	Fe	Pb	Sb	P	Bi	Chemical Composition(Percent)						Unit Size (mm)
NCS HS 43717-1	H62,Brass	(61.96)	0.242	0.022	0.025	0.061	0.0081							Φ35×40
NCS HS 43717-2	H62,Brass	(61.71)	0.131	0.042	0.0046	0.035	0.0015							Φ35×40
NCS HS 43717-3	H62,Brass	(61.33)	0.076	0.255	0.0083	0.018	0.0029							Φ35×40
NCS HS 43717-4	H62,Brass	(60.63)	0.046	0.074	0.016	0.092	0.0049							Φ35×40
NCS HS 43717-5	H62,Brass	62.40	0.018	0.132	0.0026	0.0046	0.00075							Φ35×40
Number	Name	Cu	Ag	Sn	Ni	Fe	Si	Zn	C	S	Cd	Cr	Unit Size (mm)	
NCS HS 43720-1	Copper alloy	99.995	0.0011	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	0.001	Φ35×25	
NCS HS 43720-2	Copper alloy	98.5	0.092	0.059	0.039	0.11	0.034	0.12		0.04		0.075	Φ35×25	
NCS HS43720-3	Copper alloy	98.77	0.003	0.002	0.053	0.1	0.042					0.81	Φ35×25	
NCS HS43720-4	Copper alloy	59.79		0.42	0.39		1.04	35.49					Φ35×25	
NCS HS43720-5	Copper alloy	78.22		0.26	4.46	3.34	0.3	0.73					Φ35×25	
NCS HS43720-6	Copper alloy	66.53		0.1	29.45	1.08	0.25	0.58	0.1				Φ35×25	
NCS HS43720-7	Copper alloy	85.43		0.059	11.07	1.18	0.1	0.42	0.008				Φ35×25	

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2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Zr	Mg	Co	Mn	Sb	Al	As	P	Se	Te	Bi		
NCS HS 43720-1	Copper alloy	0.0003	0.0003	<0.0002	<0.0001	<0.0002	<0.0002	0.0003	0.0006	<0.0002	<0.0002	<0.0002		
NCS HS 43720-2	Copper alloy		0.005	0.095	0.059	0.061	0.12	0.29	0.071	0.006	0.059	0.035		
NCS HS 43720-3	Copper alloy	0.13	0.081			0.006	0.019	0.015	0.001			0.001		
NCS HS 43720-4	Copper alloy				0.57		1.16	0.023	0.025			0.005		
NCS HS 43720-5	Copper alloy				2.97	0.006	9.44		0.018					
NCS HS 43720-6	Copper alloy		0.07	0.49	1.06	0.021	0.19		0.012					
NCS HS 43720-7	Copper alloy			0.59	1.09	0.006		0.024	0.01			0.006		
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Sn	Zn	Pb	Fe	Ni	Bi	Sb	P	As	Mg	S	Co	
NCS HS 43722-1	Copper alloy	0.1	0.294	0.098	0.536	0.05	0.0005	0.006	0.195	0.028	0.073	0.0056	0.024	Φ40×45
NCS HS 43722-2	Copper alloy	0.048	0.047	0.05	1.37	0.03	0.005	0.0021	0.051	0.0094	0.2	0.0028	0.048	Φ40×45
NCS HS 43722-3	Copper alloy	0.03	0.122	0.031	2.25	0.009	0.0022	0.0022	0.027	0.0043	0.015	0.0009	0.1	Φ40×45
NCS HS 43722-4	Copper alloy	0.015	0.0031	0.01	2.61	0.0024	0.011	0.021	0.111	0.002	0.084	0.0009	0.14	Φ40×45
NCS HS 43722-5	Copper alloy	0.0054	0.027	0.0063	2.37	0.001	0.022	0.011	0.0054	0.02	0.011	0.0019	0.01	Φ40×45
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Sn	Pb	Fe	Ni	Bi	Sb	P	Cu	As	S			
NCS HS 43723-1	Copper alloy	1.038	0.0054	0.448	0.98	3.002	0.0022	0.015	59.387	0.029	0.0011			Φ40×45
NCS HS 43723-2	Copper alloy	0.306	0.105	0.093	0.32	0.414	0.03	0.0088	60.903	0.015	0.0015			Φ40×45
NCS HS 43723-3	Copper alloy	0.518	0.0161	0.137	2.13	1.561	0.014	0.087	60.088	0.0054	0.012			Φ40×45
NCS HS 43723-4	Copper alloy	2.007	0.0209	0.645	2.94	0.826	0.1	0.0039	60.14	0.0097	0.015			Φ40×45
NCS HS 43723-5	Copper alloy	3.02	0.0059	0.0113	0.11	0.108	0.0047	0.0016	61.642	0.002	0.0018			Φ40×45
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Cu	Pb	Fe	Ni	Mn	Al	Si	Sn	Bi	Sb	P	S	
NCS HS 43724-1	Lead Brass	59.984	0.414	0.205	0.474	0.119	0.0749	0.0049	0.0099	(0.0110)	(0.0056)	(0.00077)	(0.00077)	Φ40×20
NCS HS 43724-2	Lead Brass	57.767	0.760	0.0426	0.795	0.184	0.0116	0.0093	0.0979	(0.0050)	(0.0021)	(0.0015)	(0.0015)	Φ40×20
NCS HS 43724-3	Lead Brass	57.089	1.421	0.0104	0.347		0.177	0.0520	0.192	(0.0030)	(0.0116)	(0.00099)	(0.00099)	Φ40×20
NCS HS 43724-4	Lead Brass	58.641	1.810	(0.703)	0.104	0.0188	0.452	(0.0070)	0.293	(0.0049)	(0.0102)	(0.00060)	(0.00060)	Φ40×20
NCS HS 43724-5	Lead Brass	58.761	2.396	0.107	0.0286	0.0517	0.761	0.209	0.689	(0.0010)	(0.0048)	(0.0010)	(0.0010)	Φ40×20
NCS HS 43724-6	Lead Brass	59.597	1.393	0.613	0.386	0.0345	0.262	0.0424	0.206	(0.0030)	(0.0291)	(0.00094)	(0.00094)	Φ40×20
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Cu	Sn	Ni	Al	Fe	Pb	P	Zn					
NCS HS 45721-1	Sn Bronze	remain	4.06	0.31	0.00096	0.116	0.072	0.33	0.22					Φ39×30
NCS HS 45721-2	Sn Bronze	remain	5.39	0.24	0.00096	0.014	0.091	0.062	0.47					Φ39×30
NCS HS 43715-3	Sn Bronze	remain	6.34	0.178	0.00085	0.034	0.031	0.154	0.43					Φ39×30
NCS HS 45721-4	Sn Bronze	remain	7.16	0.118	0.00098	0.063	0.013	0.218	0.33					Φ39×30
NCS HS 45721-5	Sn Bronze	remain	8.27	0.053	0.004	0.089	0.049	0.289	0.24					Φ39×30
NCS HS 45721-6	Sn Bronze	remain	6.52	0.18	0.0013	0.019	0.02	0.31	34					Φ39×30
Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Pb	Fe	Bi	Sb	As	Sn	Ni	Zn	P	S	Ag	Si	
NCS HS 43740	Pure Copper	0.001	0.0016	0.0011	0.0009	0.0011	0.0011	0.0015	0.0013	0.0014	0.0022	0.0024	0.0018	D40×40
NCS HS 43741	Pure Copper	0.0046	0.0036	0.0043	0.0049	0.0059	0.0059	0.0051	0.003	0.0054	0.005	0.0051	0.007	D40×40
NCS HS 43742	Pure Copper	0.0038	0.0034	0.0023	0.0028	0.0021	0.003	0.0031	0.005	0.034	0.0028	0.061		D40×40
		Mn	Co	Cr	Se	Te	Cu	Cd	Mg	Zr	Al	Ti		
NCS HS 43740	Pure Copper	0.001	0.001	0.0011	0.0008	0.0011	(99.977)							
NCS HS 43741	Pure Copper	0.0049	0.0053	0.0006	0.0067	0.0035	(99.908)	0.0004	0.0012	0.0049	0.0076			
NCS HS 43742	Pure Copper					(99.798)	0.0017					0.077		
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Sn	Zn	Pb	Ni	Al	Fe	Si	Sb	P	Cu			
NCS HS45741	Tin Bronze	7.77	4.04	2.92	0.204	0.057	0.27	0.051	0.108	0.093	Remain			40×30
NCS HS45742	Tin Bronze	9.79	2.88	1.43	0.153	0.037	0.191	0.01	0.288	0.56	Remain			40×30
NCS HS45743	Tin Bronze	9.06	1.39	4.2	0.056	0.028	0.1	0.02	0.206	0.38	Remain			40×30

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2)Copper & Copper Alloy

Number	Name	Chemical Composition(%)												Unit Size (mm)
		Pb	Fe	Bi	Sb	As	Sn	Ni	Zn	P	S	Ag	Mg	
NCS HS52719-1	Pure copper	0.0011	0.0018	0.00054	0.00055	0.00065	0.0012	0.0013	0.0014	0.0018	0.00084	0.0015	0.0028	Φ38×30
NCS HS52719-2	Pure copper	0.0024	0.0039	0.0010	0.0010	0.0012	0.0020	0.0032	0.0030	0.0027	0.0013	0.0030	0.0040	Φ38×30
NCS HS52719-3	Pure copper	0.0036	0.0048	0.0019	0.0020	0.0023	0.0041	0.0051	0.0039	0.0031	0.0013	0.0052		Φ38×30
NCS HS52719-4	Pure copper	0.010	0.012	0.010	0.010	0.0070	0.0079	0.011	0.0070	0.0091	0.0050	0.00065		Φ38×30
NCS HS52719-5	Pure copper	0.048	0.036	0.0031	0.0055	0.011	0.051	0.059	0.026	0.021	0.011	0.040	0.077	Φ38×30
NCS HS52719-6	Pure copper	0.0034	0.139	0.0011	0.0030	0.0035	0.020	0.030	0.019	0.045	0.0033	0.00061		Φ38×30
NCS HS52719-7	Pure copper	0.100	0.091				0.337	0.098				0.184		Φ38×30
		Al	Zr	Cr	Au									
NCS HS52719-1	Pure copper	0.0037	0.0031											
NCS HS52719-2	Pure copper	0.0087												
NCS HS52719-3	Pure copper													
NCS HS52719-4	Pure copper													
NCS HS52719-5	Pure copper	0.121	0.014		0.0003									
NCS HS52719-6	Pure copper			0.016										
NCS HS52719-7	Pure copper			0.024										
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Cu*	Pb	Fe	Bi	Sb	As	Sn	Ni	Zn	P	S	Ag	
NCS HS52720-1	Pure copper	99.984	0.0019	0.0020	0.00039	0.00095	0.0012	0.00088	0.0020	0.0015	0.00099	0.0020	0.0013	Φ38×30
NCS HS52720-2	Pure copper	99.974	0.0040	0.0030	0.00095	0.0019	0.0024	0.0020	0.0034	0.0022	0.0017	0.0024	0.0013	Φ38×30
NCS HS52720-3	Pure copper	99.939	0.0050	0.0051	0.0019	0.0020	0.0035	0.0029	0.0040	0.0024	0.030	0.0025	0.00068	Φ38×30
NCS HS52720-4	Pure copper	99.933	0.0022	0.0025	0.0013	0.0012	0.0023	0.0023	0.0022	0.0046	0.022	0.0058	0.00063	Φ38×30
NCS HS52720-5	Pure copper		0.0055	0.011	0.0044	0.0054	0.0051	0.0050	0.0055	0.0062	0.0061	0.0064	0.0052	Φ38×30
NCS HS52720-6	Pure copper		0.0049	0.0078	0.0045	0.00026	0.0058	0.0052	0.0054	0.0046	0.0070	0.0050	0.0046	Φ38×30
NCS HS52720-7	Pure copper		0.036	0.062	0.0047	0.0052	0.014	0.152	0.195	0.065	0.063	0.00094	0.080	Φ38×30
NCS HS52720-8	Pure copper		0.053	0.068	0.0049	0.0052	0.011	0.203	0.152	0.117	0.045	0.0013	0.112	Φ38×30
NCS HS52720-8a	Pure copper		0.054	0.068	0.0049	0.0052	0.011	0.203	0.152	0.120	0.047	0.0017	0.112	Φ38×30
NCS HS52720-9	Pure copper		0.074	0.078	0.0086	0.0092	0.015	0.244	0.145	0.087	0.061	0.0005	0.167	Φ38×30
NCS HS52720-9a	Pure copper		0.073	0.078	0.0086	0.0092	0.015	0.244	0.145	0.088	0.061	0.0005	0.167	Φ38×30
		Cd	Cr	Si	Te	Se	Co	Mn	Mg	Al	Au	Zr		
NCS HS52720-1	Pure copper	0.0003												
NCS HS52720-2	Pure copper	0.00053												
NCS HS52720-3	Pure copper	0.0007												
NCS HS52720-4	Pure copper	0.0010	0.019											
NCS HS52720-5	Pure copper	0.0024	0.051	0.010	0.0032	0.0038	0.0048	0.0041	0.0012	0.015	0.0012	0.0076		
NCS HS52720-6	Pure copper	0.0011	0.0080	0.0043	0.0033	0.0043	0.0056	0.0045						
NCS HS52720-7	Pure copper		0.024	0.016				0.0009	0.094	0.261				
NCS HS52720-8	Pure copper		0.136	0.019				0.0010	0.023	0.123				
NCS HS52720-8a	Pure copper		0.129	0.019				0.0010	0.031	0.133				
NCS HS52720-9	Pure copper		0.024	0.026				0.0016	0.126	0.430		0.011		
NCS HS52720-9a	Pure copper		0.024	0.026				0.0016	0.160	0.430		0.015		
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Cu	Fe	Pb	Al	Mn	Sn	Cd	Ni	As	P	Bi	Sb	
NCS HS52721-1	Brass	58.21	0.017	0.305	0.076		0.302	0.00074	0.311		0.0104	0.0025	0.014	Φ38×30
NCS HS52721-2	Brass	61.67	0.068	0.059	0.049	0.041	0.067	0.00079	0.146	0.0083	0.0069	0.0046	0.0079	Φ38×30
NCS HS52721-3	Brass	64.20	0.046	0.030	0.114	0.0019	0.178	0.00044	0.101	0.0058	0.0077	0.0050	0.0049	Φ38×30
NCS HS52721-4	Brass	64.87	0.0101	0.0056			0.022	0.0020	0.0209	0.0049	0.0011	0.0051	0.0051	Φ38×30
NCS HS52721-5	Brass	68.41	0.028	0.028	0.143	0.0009	0.139	0.0004	0.193	0.050	0.0060	0.0052	0.0055	Φ38×30
		Cr	Si	Zn										
NCS HS52721-1	Brass			40.70										
NCS HS52721-2	Brass	0.0083	0.040	37.78										
NCS HS52721-3	Brass			35.23										
NCS HS52721-4	Brass			34.94										
NCS HS52721-5	Brass			30.98										

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2)Copper & Copper Alloy

Number	Name	Chemical Composition(%)												Unit Size (mm)
		Cu	Pb	Fe	Al	Mn	Sn	Si	Ni	As	Bi	Sb	P	
NCS HS52722-1	Pb brass	57.20	1.92	0.067	0.040	0.015	0.234	0.012	0.123	0.018	0.059	0.023	0.0037	Φ38×30
NCS HS52722-2	Pb brass	58.34	2.25	0.27	0.155	0.082	0.204	0.022	0.311	0.121	0.11	0.025	0.017	Φ38×30
NCS HS52722-3	Pb brass	61.16	3.16	0.185	0.087	0.015	0.085	0.032	0.101	0.089	0.016	0.015	0.013	Φ38×30
NCS HS52722-4	Pb brass	59.88	1.09	0.118	0.178	0.195	0.101	0.045	0.094	0.016	0.010	0.032	0.0080	Φ38×30
NCS HS52722-5	Pb brass	58.16	1.89	0.089	0.084	0.018	0.180	0.015	0.19	0.031	0.025	0.013	0.0082	Φ38×30
NCS HS52722-6	Pb brass	57.79	3.89	0.137	0.038	0.026	0.238	0.028	0.181	0.051	0.035	0.017	0.011	Φ38×30
		Mg	Zn											
NCS HS52722-1	Pb brass	0.0106	40.27											
NCS HS52722-2	Pb brass		38.14											
NCS HS52722-3	Pb brass		34.95											
NCS HS52722-4	Pb brass		38.17											
NCS HS52722-5	Pb brass		39.22											
NCS HS52722-6	Pb brass		37.53											
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Cu	Sn	P	Fe	Pb	Al	Zn	Ni	Si	Sb	Bi	Ag	
NCS HS52723-1	Sn bronze	92.69	6.00	0.109	0.071	0.010	0.0001	0.440	0.475	0.0008	0.0016	0.0009	0.0073	Φ35×30
NCS HS52723-2	Sn bronze	92.90	6.02	0.078	0.040	0.010	0.0001	0.407	0.476	0.0008	0.0016	0.0009	0.0074	Φ35×30
NCS HS52723-3	Sn bronze	92.80	6.05	0.103	0.066	0.010		0.446	0.474	0.0008	0.0015	0.0009	0.0074	Φ35×30
NCS HS52723-4	Sn bronze	93.58	6.18	0.0002	0.0012	0.047		0.027	0.056	0.0009	0.0014	0.0004	0.0017	Φ35×30
		S												
NCS HS52723-1	Sn bronze	0.0065												
NCS HS52723-2	Sn bronze	0.0072												
NCS HS52723-3	Sn bronze	0.0067												
NCS HS52723-4	Sn bronze	0.0043												

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3)Other Metals

Number	Name	Chemical Composition(Percent)					Unit Size (mm)						
		Fe	Si	Al	C	V							
NCS HS 44701-1	Titanium alloy	0.39	0.277	3.9	0.158	5.65	Φ36×25						
NCS HS 44701-2	Titanium alloy	0.314	0.196	4.67	0.119	5.01	Φ36×25						
NCS HS 44701-3	Titanium alloy	0.239	0.115	5.38	0.095	3.41	Φ36×25						
NCS HS 44701-4	Titanium alloy	0.143	0.052	6.48	0.051	4.46	Φ36×25						
NCS HS 44701-5	Titanium alloy	0.131	0.085	6.78	0.023	3.85	Φ36×25						
NCS HS 44701-6	Titanium alloy	0.073	0.031	7.03	0.0193	2.75	Φ36×25						
Number	Name	Chemical Composition(Percent)								Unit Size (mm)			
		Si	Fe	Cu	Mn	Ni	Zn	Al	Be				
NCS HS 49723-1	Magnesium Alloy	0.034	(0.039)	0.0029	0.92	0.0012	0.057	6.10	(0.0020)	Φ45×25			
NCS HS 49723-2	Magnesium Alloy	0.173	0.0089	0.0081	0.338	0.0008	0.237	2.55	0.0009	Φ45×25			
NCS HS 49723-3	Magnesium Alloy	0.27	0.015	0.020	0.182	(0.0015)	0.171	7.33	0.00015	Φ45×25			
NCS HS 49723-4	Magnesium Alloy	0.286	(0.016)	0.020	0.428	(0.0068)	0.271	6.29	(0.0010)	Φ45×25			
NCS HS 49723-5	Magnesium Alloy	0.239	0.025	0.013	(0.65)	0.0025	0.105	4.57	0.0009	Φ45×25			
NCS HS 49723-6	Magnesium Alloy	0.065	0.0049	0.010	0.130	0.010	0.492	1.36	0.0033	Φ45×25			
Number	Name	Chemical Composition(Percent)									Unit Size (mm)		
		Si	Fe	Cu	Mn	Zn	Ti	Ni	Al	Pb			
NCS HS 49725-1	Pure Magnesium	0.011	0.0028	0.0012	0.017	0.011	0.00027	0.00035	0.011	0.0052	Φ45×25		
NCS HS 49725-2	Pure Magnesium	0.062	0.027	0.0077	0.085	0.047	0.00018	0.011	0.531	0.037	Φ45×25		
NCS HS 49725-3	Pure Magnesium	0.023	0.0083	0.0087	0.019	0.012	0.000062	0.0021	0.017	0.0067	Φ45×25		
NCS HS 49725-4	Pure Magnesium	0.034	0.0069	0.014	0.023	0.019	0.0012	0.0044	0.262	0.012	Φ45×25		
NCS HS 49725-5	Pure Magnesium	0.0063	0.0022	0.00063	0.0060	0.0076	0.000072	0.00033	0.0059	0.0020	Φ45×25		
NCS HS 49725-6	Pure Magnesium	0.020	0.020	0.025	0.148	0.025	0.0025	0.0052	1.06	0.018	Φ45×25		
NCS HS 49725-7	Pure Magnesium	0.030	0.0055	0.0039	0.017	0.013	0.00010	0.0013	0.0082	0.0067	Φ45×25		
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Al	Mo	Nb	Sn	Zr	Cr	Si	Fe	C	O*	N*	
NCS HS 93741	Titanium Alloy	6.24						0.024	0.047	0.013			Φ36×25
NCS HS 93742	Titanium Alloy	5.99	2.89	1.97	2.24	1.99	1.22	0.067	0.05	0.01	0.13	0.01	Φ36×25
		H*	V										
NCS HS 93741	Titanium Alloy		4.08										
NCS HS 93742	Titanium Alloy	0.001											
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Al	Fe	Mo	V	Zr					
NCS HS11903	Titanium Alloy	0.012	0.261	6.74	0.097	3.37		1.52					Φ40×30
NCS HS11904	Titanium Alloy	0.0093	0.018	6.24	0.191		4.19						Φ40×30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Cu	Ag	Bi	As	Sb	Sn	Zn	Ni	Cd	Fe*		
NCS HS 52702-1	Pure Lead	0.0004	0.0002	0.00055	0.00012	0.00025	0.00015	0.00015	0.00015	0.0001	0.00025		Φ40×25
NCS HS 52702-2	Pure Lead	0.0011	0.0011	0.0047	0.00043	0.0017	0.0002	0.00032	0.00063	0.00055	0.0003		Φ40×25
NCS HS 52702-3	Pure Lead	0.0029	0.0025	0.021	0.00092	0.0056	0.00025	0.0004	0.0015	0.001	0.0003		Φ40×25
NCS HS 52702-4	Pure Lead	0.0056	0.0051	0.041	0.0053	0.023	0.00075	0.001	0.0019	0.0019	0.00027		Φ40×25
NCS HS 52702-5	Pure Lead	0.0142	0.0102	0.069	0.0145	0.058	0.0012	0.0012	0.0033	0.0029	0.0005		Φ40×25
Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		Ca	Sn	Al	Bi	Ag							
NCS HS 52703-1	Lead-Tin-Calcium alloy	0.021	0.125	0.0037	0.0034	0.0087							Φ48×30
NCS HS 52703-2	Lead-Tin-Calcium alloy	0.067	0.626	0.0093	0.013	0.0065							Φ48×30
NCS HS 52703-3	Lead-Tin-Calcium alloy	0.111	0.95	0.014	0.022	0.0087							Φ48×30
NCS HS 52703-4	Lead-Tin-Calcium alloy	0.168	1.35	0.027	0.033	0.012							Φ48×30
NCS HS 52703-5	Lead-Tin-Calcium alloy	0.302	1.63	0.036	0.048	0.017							Φ48×30

Section 8 Nonferrous Metal(Disk)

3)Other Metals

Number	Name	Chemical Composition(%)											Unit Size (mm)	
		Ca	Sn	Al	Fe	Cu	Zn	Sb	As	Bi	Ni	Cd		
NCS HS52705-1	Lead-Calcium alloy	0.086	0.082	0.03	(0.0001)	0.00095	0.0052	0.0028		0.0013		0.00037	Φ40×25	
NCS HS52705-2	Lead-Calcium alloy	0.068	0.24	0.039			0.0025	0.0022	0.0002		0.0069		0.00083	Φ40×25
NCS HS52705-3	Lead-Calcium alloy	0.11	0.32	0.025			0.002	0.0018	0.001	(0.0001)	0.0072		0.00064	Φ40×25
NCS HS52705-4	Lead-Calcium alloy	0.079	1.18	0.032			0.0026	0.0022	0.003	(0.0001)	0.0072		0.001	Φ40×25
NCS HS52705-5	Lead-Calcium alloy	0.077	1.27	0.015			0.0027	0.0062	0.0005	(0.0001)	0.0061		0.0017	Φ40×25
NCS HS52705-6	Lead-Calcium alloy	0.092	1.47	0.026		0.0002	0.0028	0.002	0.0009	0.0003	0.0071		0.001	Φ40×25
NCS HS52705-7	Lead-Calcium alloy	0.096	0.11	0.027			0.0018	0.0042	0.0018		0.0042	0.00014	0.0011	Φ40×25
NCS HS52705-8	Lead-Calcium alloy	0.078	0.17	0.015			0.0019	0.001	0.0004		0.0037	0.00028	0.0014	Φ40×25
NCS HS52705-9	Lead-Calcium alloy	0.13	0.091	0.03			0.0043	0.00052	0.0003		0.0025		0.0013	Φ40×25
NCS HS52705-10	Lead-Calcium alloy	0.076	1.63	0.016			0.00079	0.00094	(0.00018)	(0.00005)	0.00099		0.00083	Φ40×25
		Ag	La	Ce										
NCS HS52705-1	Lead-Calcium alloy	0.00086	0.0008	0.00099										
NCS HS52705-2	Lead-Calcium alloy	0.00082	0.0012	0.0017										
NCS HS52705-3	Lead-Calcium alloy	0.00096	0.00076	0.00066										
NCS HS52705-4	Lead-Calcium alloy	0.00097	0.0064	0.0066										
NCS HS52705-5	Lead-Calcium alloy	0.0023	0.004	0.0028										
NCS HS52705-6	Lead-Calcium alloy	0.0037	0.012	0.018										
NCS HS52705-7	Lead-Calcium alloy	0.001	0.049	(0.041)										
NCS HS52705-8	Lead-Calcium alloy	0.0058	0.03	0.027										
NCS HS52705-9	Lead-Calcium alloy	0.00096	0.039	0.035										
NCS HS52705-10	Lead-Calcium alloy	0.0017	0.052	0.012										
Number	Name	Ca	Sn	Al	Chemical Composition(%)								Unit Size (mm)	
					Ag	Cu	Zn	Sb	Bi	Cd	La	Ce		
NCS HS52706-1	Lead-Tin-Calcium alloy	0.1	0.096	0.023	0.00018	0.002	0.017	0.0019	0.011	0.0006	0.0011	0.00095	Φ40×20	
NCS HS52706-2	Lead-Tin-Calcium alloy	0.08	0.076	0.013	0.0021	0.0042	0.014	0.001	0.014	0.00057	0.0006	0.0012	Φ40×20	
NCS HS52706-3	Lead-Tin-Calcium alloy	0.071	0.085	0.012	0.001	0.0026	0.01	0.00054	0.0073	0.001	0.0004	0.0004	Φ40×20	
NCS HS52706-4	Lead-Tin-Calcium alloy	0.078	0.086	0.017	0.00081	0.001	0.011	0.00011	0.0071	0.00069	0.0002	0.00035	Φ40×20	
NCS HS52706-5	Lead-Tin-Calcium alloy	0.1	0.12	0.038	0.00075	0.0021	0.0005	0.00086	0.0065	0.00064	(0.00006)	(0.00015)	Φ40×20	
NCS HS52706-6	Lead-Tin-Calcium alloy	0.082	0.086	0.037	0.00066	0.0019	0.0032	(0.0004)	0.0065	0.00044	0.0016	0.0019	Φ40×20	
Number	Name	Al	Fe	Cd	Chemical Composition(%)								Unit Size (mm)	
					Sn	Pb	Cu	Mg	Ni	Mn	Bi	Sb		
NCS HS52707-1	Zinc alloy for hot dip galvanization	0.25	0.00085	0.0018	0.0015	0.0042	0.0025	0.0037	0.0011	0.0019	0.0012	0.0025	Φ38×30	
NCS HS52707-2	Zinc alloy for hot dip galvanization	0.4	0.0012	0.0023	0.00073	0.0037	0.0051	0.0038	0.0016	0.002	0.0019	0.0025	Φ38×30	
NCS HS52707-3	Zinc alloy for hot dip galvanization	0.55	0.00085	0.0018	0.0012	0.0037	0.0019	0.0011	0.00068	0.0027	0.0016	0.0011	Φ38×30	
NCS HS52707-4	Zinc alloy for hot dip galvanization	0.69	0.00099	0.002	0.0015	0.0039	0.0036		0.0018	0.0042	0.0017	0.0053	Φ38×30	
NCS HS52707-5	Zinc alloy for hot dip galvanization	0.82	0.0013	0.0025	0.0014	0.0042	0.0024	0.0038	0.0014	0.0033	0.0011	0.0022	Φ38×30	
NCS HS52707-6	Zinc alloy for hot dip galvanization	1.07	0.0013	0.00165		0.004	0.0014	0.0026	0.0009	0.0052	0.001	0.004	Φ38×30	
Number	Name	Al	Fe	Cd	Chemical Composition(%)								Unit Size (mm)	
					Sn	Pb	Cu							
NCS HS52708-1	Zinc alloy for hot dip galvanization	0.48	0.0016	0.00085	0.001	0.0025	0.0017							Φ40×20
NCS HS52708-2	Zinc alloy for hot dip galvanization	0.74	0.0026	0.0026	0.0009	0.0024	0.0029							Φ40×20
NCS HS52708-3	Zinc alloy for hot dip galvanization	0.91	0.002	0.0019	0.0016	0.0025	0.0022							Φ40×20
NCS HS52708-4	Zinc alloy for hot dip galvanization	1.31	0.002	0.0019	0.002	0.0025	0.0026							Φ40×20
NCS HS52708-5	Zinc alloy for hot dip galvanization	1.53	0.0024	0.0019	0.0015	0.0024	0.0018							Φ40×20
NCS HS52708-6	Zinc alloy for hot dip galvanization	0.095	0.027	0.0016	0.0025	0.0019	0.57							Φ40×20
NCS HS52708-7	Zinc alloy for hot dip galvanization	0.48	0.0013	0.0026	0.00077	0.0026	0.0021							Φ40×20

Section 8 Nonferrous Metal(Disk)

3)Other Metals

Number	Name	Al	Sb	Fe	Cd	Chemical Composition(%)						Unit Size (mm)	
NCS HS52709-1	Zinc alloycontain Sb for hot dip galvanization	0.48	0.144	0.001	0.0021	0.00053	0.0029	0.0045	0.0021	0.0009	0.0048	0.0015	Φ38×30
NCS HS52709-2		0.59	0.097		0.002	0.0018	0.0041	0.011	0.0024	0.001	0.0044	0.0013	Φ40×20
NCS HS52709-3		0.75	0.24		0.0022	0.002	0.0043	0.03	0.0031	0.001	0.004	0.0019	Φ40×20
NCS HS52709-4		0.5	0.051	0.0012	0.0022	0.0016	0.0038	0.0022					Φ40×20
NCS HS52709-5		0.58	0.19	0.0013	0.0015	0.0015	0.003	0.0018					Φ40×25
NCS HS52709-6		0.8	0.12	0.0054	0.0062	0.00074	0.0029	0.0031			0.00088		Φ40×20
NCS HS52709-7		0.94	0.093	0.0016	0.0017	0.00088	0.0041	0.0024					Φ40×20
NCS HS52709-8		1.09	0.116	0.0052	0.0011	0.0017	0.003	0.0038		0.0002	0.00058		Φ40×20
NCS HS52709-9		1.49	0.22	0.0022	0.0008	0.0011	0.003	0.0017		0.0001			Φ40×20
NCS HS52709-10		1.61	0.17	0.0026	0.00034	0.0012	0.003	0.0017					Φ40×20
Number	Name	Al	Sb	Fe	Cd	Chemical Composition(%)						Unit Size (mm)	
NCS HS52710-1	Zinc alloycontain Sb for hot dip galvanization	0.14	0.0196	0.0125	0.0033	0.00093	0.0042	0.0033			0.0015		Φ40×20
NCS HS52710-2		0.29	0.16	0.0059	0.0019	0.0014	0.0025	0.0033					Φ40×20
NCS HS52710-3		0.93	0.12	0.0051	0.00078	0.0022	0.002	0.0087					Φ40×20
NCS HS52710-4		1	0.21	0.0088	0.0023	0.0022	0.0044	0.051	0.0053	0.001	0.0041	0.0019	Φ40×20
NCS HS52710-5		2.76	0.16	0.0072	0.0015	0.0016	0.003	0.0246		0.00059	0.0014	0.00039	Φ40×20
Number	Name	Pb	Cd	Fe	Cu	Sn	Al	Ni	Bi	Sb	Mg	Unit Size (mm)	
NCS HS52712-1	Pure Zinc	0.0015	0.0015	0.00092	0.0012	0.0011	0.00071	0.00063	0.00096	0.0012	0.0003	Φ38×30	
NCS HS52712-2	Pure Zinc	0.0016	0.0015	0.00081	0.0012	0.0011	0.0015	0.00057	0.00096	0.0011	0.002	Φ38×30	
NCS HS52712-3	Pure Zinc	0.0026	0.0022	0.0025	0.001	0.0012	0.0021	0.0023	0.002	0.0022	0.00074	Φ38×30	
NCS HS52712-4	Pure Zinc	0.0048	0.002	0.0038	0.0022	0.00069	0.0086					Φ38×30	
NCS HS52712-5	Pure Zinc	0.0196	0.0093	0.0165	0.002	0.00092	0.003					Φ38×30	
Number	Name	Al	Cu	Mg	Fe	Pb	Cd	Sn	Ni	Si	Mn	La	Unit Size (mm)
NCS HS52713-1	Zinc alloy	3.93	0.0543	0.045	0.0025	0.0061	0.0027	0.0011	0.0013	0.0019	0.0156	0.0133	Φ38×30
NCS HS52713-2	Zinc alloy	4.03	0.34	0.0402	0.0044	0.0064	0.003	0.0015	0.0021	0.002	0.0042	0.0073	Φ38×30
NCS HS52713-3	Zinc alloy	4.22	0.83	0.0376	0.0025	0.0062	0.0022	0.0012	0.0011	0.0019	0.0071	0.0056	Φ38×30
NCS HS52713-4	Zinc alloy	4.25	3.13	0.0441	0.0032	0.0043	0.0025	0.0014	0.0016	0.0019		0.00072	Φ38×30
NCS HS52713-1a	Zinc alloy	4.12	0.033	0.037	0.0022	0.0051	0.0026	0.0013	0.0124	0.0017	0.0124	0.0043	Φ40×25
NCS HS52713-2a	Zinc alloy	4.27	0.33	0.039	0.0036	0.0064	0.0029	0.0016	0.0016	0.0018	0.0046	0.0091	Φ40×20
NCS HS52713-5	Zinc alloy	8.42	1.18	0.024	0.0085	0.003	0.0027	0.00095	0.0031	0.0029	0.0022	0.0012	Φ40×20
NCS HS52713-5a	Zinc alloy	8.26	1.21	0.016	0.0076	0.0033	0.0025	0.0014	0.0028	0.0028	0.0028		Φ40×20
NCS HS52713-6	Zinc alloy	5.52	1.39	0.0034		0.004	0.002	0.0018	0.002	0.0021	0.0026		Φ40×25
NCS HS52713-7	Zinc alloy	4.03	0.0023	0.043	0.0057	0.0033	0.0018	0.0014	0.0011	0.0022	0.0003		Φ40×25
NCS HS52713-8	Zinc alloy	4.06	0.0069	0.015	0.0058	0.0027	0.0012	0.0001	0.0092	0.0016	0.0002		Φ40×25
NCS HS52713-9	Zinc alloy	4.27	0.15	0.0454	0.005	0.0026	0.0025	0.0003	0.0017	0.0016	0.0002		Φ40×25
NCS HS52713-10	Zinc alloy	4.3	2.04	0.051	0.006	0.0029	0.003	0.0012	0.0013	0.0021			Φ40×25
NCS HS52713-11	Zinc alloy	3.18	5.39	0.049	0.004	0.0068	0.0026	0.0026	0.0027	0.0012			Φ40×25
NCS HS52713-12	Zinc alloy	6.93	3.77	0.023	0.0076	0.0033	0.0038	0.0013	0.0039	0.0027		0.0008	Φ40×25
NCS HS52713-13	Zinc alloy	11.29	1.02	0.034	0.014	0.0028	0.0038	0.0021	0.0004	0.0038	0.0005		Φ40×20
NCS HS52713-14	Zinc alloy	11.19	5.15	0.052	0.012	0.0052	0.0044	0.0028	0.0004	0.004	0.0003		Φ40×20
NCS HS52713-15	Zinc alloy	8.63	1.14	0.023	0.016	0.0043	0.0011	0.0013	0.0014	0.0032			Φ40×20
NCS HS52713-16	Zinc alloy	11.95	0.85	0.028	0.016	0.0021	0.0018	0.0022	0.0016	0.0069			Φ40×20
NCS HS52713-17	Zinc alloy	29.38	1.88	0.012	0.041	0.002	0.0012	0.003	0.003	0.018	0.0014		Φ40×18

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3)Other Metals

		Ce	Ti	Bi	Cr	Tl							
NCS HS52713-1	Zinc alloy	0.0195	0.0031										
NCS HS52713-2	Zinc alloy	0.0109	0.0045										
NCS HS52713-3	Zinc alloy	0.0075	0.0022										
NCS HS52713-4	Zinc alloy	0.0012											
NCS HS52713-1a	Zinc alloy	0.0055											
NCS HS52713-2a	Zinc alloy	0.0136											
NCS HS52713-5	Zinc alloy	0.0016	0.00055										
NCS HS52713-5a	Zinc alloy			0.00042									
NCS HS52713-6	Zinc alloy			0.0013									
NCS HS52713-7	Zinc alloy		0.0001		0.0003	0.0004							
NCS HS52713-8	Zinc alloy				0.0001	0.0004							
NCS HS52713-9	Zinc alloy												
NCS HS52713-10	Zinc alloy												
NCS HS52713-11	Zinc alloy			0.0023									
NCS HS52713-12	Zinc alloy	0.0012											
NCS HS52713-13	Zinc alloy												
NCS HS52713-14	Zinc alloy												
NCS HS52713-15	Zinc alloy												
NCS HS52713-16	Zinc alloy												
NCS HS52713-17	Zinc alloy												
Number	Name	Al	Cu	Mg	Fe	Pb	Cd	Sn	Ni	Si	Mn	La	Unit Size (mm)
NCS HS52714-1	Zinc alloy	4.1	0.5	0.033	0.0043	0.0055	0.0027	0.016	0.01	0.0017	0.0077	0.00386	Φ40×20
NCS HS52714-2	Zinc alloy	3.92	2.9	0.047	0.0038	0.0021	0.0021	0.0018	0.00115	0.0018			Φ40×20
NCS HS52714-3	Zinc alloy	3.98	0.93	0.052	0.0038	0.0016	0.0022	0.0014	0.001	0.0022			Φ40×25
NCS HS52714-4	Zinc alloy	3.08	5.35	0.045	0.0124	0.018	0.0023	0.017	0.022	0.003	0.0042		Φ40×25
NCS HS52714-5	Zinc alloy	4.42	1.24	0.506	0.0184	0.011	0.0021	0.015	0.0044	0.003	0.004		Φ40×20
NCS HS52714-6	Zinc alloy	26.09	2.09	0.017	0.042	0.0018	0.00386	0.0029	0.0013	0.007	0.0019		Φ40×20
		Ce	Ti										
NCS HS52714-1	Zinc alloy	0.0045	0.00021										
NCS HS52714-4	Zinc alloy		0.0022										
NCS HS52714-5	Zinc alloy		0.0006										
Number	Name	Al	Fe	Cd	Sn	Pb	Cu	Mg	Ni	Si			Unit Size (mm)
NCS HS52715-1	Zinc alloy for hot dip galvanization	10.24	0.013	0.0011	0.0015	0.0016	0.00049		0.0013	0.0039			Φ40×20
NCS HS52715-2	Zinc alloy for hot dip galvanization	16.27	0.037	0.0016	0.0044	0.0033	0.0023	0.0003	0.0031	0.0048			Φ40×20
NCS HS52715-3	Zinc alloy for hot dip galvanization	21.32	0.047	0.0034	0.0013	0.0012	0.0025	0.0002	0.0014	0.0063			Φ40×20
Number	Name	Al	Cu	Mg	Fe	Pb	Cd	Sn	Ni	Si	Mn	La	Unit Size (mm)
NCS HS52716-1	Zn-Al-Mg alloy	0.28	0.0055	0.27	0.0018	0.0017	0.00066	0.00033					Φ40×20
NCS HS52716-2	Zn-Al-Mg alloy	0.5	0.0055	0.36	0.0019	0.0016	0.0012	0.00032					Φ40×20
NCS HS52716-3	Zn-Al-Mg alloy	1.03	0.0036	0.99	0.002	0.0024	0.0015	0.00086					Φ40×20
NCS HS52716-4	Zn-Al-Mg alloy	1.97	0.0052	1.77	0.0048	0.0049	0.0013	0.0021			0.002		Φ40×20
NCS HS52716-5	Zn-Al-Mg alloy	2.72	0.021	2.59	0.0062	0.0022	0.00072	0.00079	0.0002	0.0022	0.0019		Φ40×20
NCS HS52716-6	Zn-Al-Mg alloy	3.28	0.1	3.16	0.0032	0.0035	0.0026	0.00081	0.00063	0.0024	0.0031	0.0034	Φ40×20
NCS HS52716-7	Zn-Al-Mg alloy	4.26	0.11	5.66	0.0056	0.0029	0.001	0.00066	0.00072	0.0046	0.0046	0.0035	Φ40×20
NCS HS52716-8	Zn-Al-Mg alloy	5.22	0.009	6.6	0.0052	0.0012	0.0015	0.002	0.0002	0.0054	0.0033		Φ40×20
NCS HS52716-9	Zn-Al-Mg alloy	6.17	0.0062	9.43	/	0.0012	0.0012	0.0011	0.00066	0.0066	0.0046		Φ40×20
NCS HS52716-10	Zn-Al-Mg alloy	1.53	0.005	1.57	0.0032	0.0051	0.0017	0.0021	0.0002	0.0041	0.0012		Φ40×20
NCS HS52716-11	Zn-Al-Mg alloy	9.78	0.0021	3.21	0.011	0.0041	0.001	0.0007	0.0006	0.013	0.0016	0.0093	Φ40×20
NCS HS52716-12	Zn-Al-Mg alloy	7.34	0.0035	4.35	0.0063	0.0068	0.0014	0.002	0.0004	0.0086	0.0019	0.013	Φ40×20
NCS HS52716-13	Zn-Al-Mg alloy	9.03	0.0081	8.37		0.0034	0.0025	0.0016	0.0024	0.019	0.0061	0.011	Φ40×20
NCS HS52716-14	Zn-Al-Mg alloy	59.84	0.0048	1.93	0.064	0.0014	0.013	0.0027	0.0038	0.034	0.0027	0.016	Φ40×18
NCS HS52716-15	Zn-Al-Mg alloy	58.52	0.0053	2.35	0.059	0.0016	0.0049	0.0034	0.0032	0.036	0.003	0.02	Φ40×20

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3)Other Metals

		Ce	Ti	Cr									
NCS HS52716-6	Zn-Al-Mg alloy	0.0048											
NCS HS52716-7	Zn-Al-Mg alloy	0.0048											
NCS HS52716-11	Zn-Al-Mg alloy	0.012											
NCS HS52716-12	Zn-Al-Mg alloy	0.019											
NCS HS52716-13	Zn-Al-Mg alloy	0.016	0.0001										
NCS HS52716-14	Zn-Al-Mg alloy	0.025	0.0004										
NCS HS52716-15	Zn-Al-Mg alloy	0.031	0.0004	0.001									
Number	Name	Al	Cu	Mg	Fe	Pb	Cd	Sn	Ni	Si	Mn	La	Unit Size (mm)
NCS HS52717-1	Zn-Al-Si alloy	10.83	0.0083	0.052	0.015	0.0036	0.0026	0.003	0.0007	0.347	0.0055		φ40×20
NCS HS52717-2	Zn-Al-Si alloy	16.33	0.013	0.017	0.033	0.0043	0.003	0.0025		0.621	0.0036		φ40×20
NCS HS52717-3	Zn-Al-Si alloy	57.27	0.028	0.015	0.065	0.0014	0.0072	0.0013	0.0067	1.54	0.0013	0.027	φ40×18
NCS HS52717-4	Zn-Al-Si alloy	63.46	0.036	0.0035	0.0035	0.0045	0.0067	0.0052	0.0055	1.76	0.0014	0.034	φ40×18
		Ce	Sb	Cr									
NCS HS52717-2	Zn-Al-Si alloy			0.003									
NCS HS52717-3	Zn-Al-Si alloy	0.04	0.0024	0.0026									
NCS HS52717-4	Zn-Al-Si alloy	0.051	0.0033	0.0009									
Number	Name	Al	Mg	Si	La	Ce	Fe	Pb	Cu	Cd	Sn	Ni	Unit Size (mm)
NCS HS52718-1	Zn-Al-Mg-Si alloy	7.36	3.07	0.146	0.014	0.022	0.010	0.0024	0.014	0.0029	0.0026	0.0022	φ40×20
NCS HS52718-2	Zn-Al-Mg-Si alloy	11.49	2.27	0.318	/	/	0.011	0.0020	0.0040	0.0058	0.0022	0.0008	φ40×20
NCS HS52718-3	Zn-Al-Mg-Si alloy	11.49	1.64	0.539	0.023	0.036	0.013	0.0035	0.0040	0.0017	0.0020	0.0019	φ40×20
NCS HS52718-4	Zn-Al-Mg-Si alloy	55.59	1.94	1.76	0.151	0.237	0.073	0.0026	0.036	0.0056	0.0022	0.0049	φ40×20
NCS HS52718-5	Zn-Al-Mg-Si alloy	58.81	1.87	1.31	0.085	0.126	0.056	0.0050	0.030	0.0049	0.0036	0.0050	φ40×20
NCS HS52718-6	Zn-Al-Mg-Si alloy	11.06	5.02	0.288	0.026	0.039	0.0090	0.0037	0.0087	0.0024	0.0020	0.0012	φ40×20
NCS HS52718-7	Zn-Al-Mg-Si alloy	11.47	2.37	0.264	0.011	0.016	0.0087	0.0026	0.0040	0.0011	0.0010	0.0083	φ40×20
NCS HS52718-8	Zn-Al-Mg-Si alloy	5.86	1.81	0.182	0.024	0.036	0.0071	0.0021	0.0012	0.0015	0.0119	0.0023	φ40×20
		Mn	Ti	Cr									
NCS HS52718-1	Zn-Al-Mg-Si alloy	0.0025											
NCS HS52718-2	Zn-Al-Mg-Si alloy	0.0019											
NCS HS52718-3	Zn-Al-Mg-Si alloy	0.0011											
NCS HS52718-4	Zn-Al-Mg-Si alloy	0.0042	0.0015	0.0020									
NCS HS52718-5	Zn-Al-Mg-Si alloy	0.0038	0.012	0.0012									
NCS HS52718-6	Zn-Al-Mg-Si alloy	0.0066	0.0051										
NCS HS52718-7	Zn-Al-Mg-Si alloy	0.0034											
NCS HS52718-8	Zn-Al-Mg-Si alloy	0.0021											

Section 8 Nonferrous Metal(Disk)

3)Other Metals

Number	Name	Chemical Composition(%)										Unit Size (mm)	
		Ca	Sn	Al	Cu	Zn	Sb	Bi	Cd	Ag	Pb		
NCS HS52724-1	Pb-Ca alloy	0.12	0.11	0.027	0.0027	0.0017	0.00091	0.0085	0.0010	0.0019	remain	Φ40×25	
NCS HS52724-2	Pb-Ca alloy	0.10	0.15	0.025	0.0013	0.00055	0.00073	0.0019	0.00069	0.0012	remain	Φ40×25	
NCS HS52724-3	Pb-Ca alloy	0.13	0.24	0.033	0.0019	0.0018	0.00065	0.0060	0.00085	0.0012	remain	Φ40×25	
NCS HS52724-4	Pb-Ca alloy	0.082	1.08	0.022	0.0015	0.0032	0.0011	0.0035	0.0012	0.0015	remain	Φ40×25	
NCS HS52724-5	Pb-Ca alloy	0.078	1.56	0.020	0.0027	0.0015	0.0010	0.0066	0.0010	0.0012	remain	Φ40×25	
NCS HS52724-6	Pb-Ca alloy	0.12	0.099	0.016	0.00090	0.0035	0.0050	0.028	0.00042	0.00083	remain	Φ40×25	
Number	Name	Chemical Composition(%)										Unit Size (mm)	
		Sb	Sn	Cu	Se	Ag	Bi	Zn	Fe	Ni	Cd		Te
NCS HS52725-1	Pb-Sb alloy	0.80	0.0050	0.0040	--	0.0010	0.0056	0.0013	--	0.00009	0.0016	0.0017	Φ40×20
NCS HS52725-2	Pb-Sb alloy	1.22	0.0037	0.0064	0.00012	0.0054	0.011	0.0026	0.00009	0.00013	0.0021	0.0059	Φ40×20
NCS HS52725-3	Pb-Sb alloy	2.08	0.022	0.018	0.00099	0.0089	0.018	0.00057	--	0.00075	0.00091	0.011	Φ40×20
NCS HS52725-4	Pb-Sb alloy	4.26	0.044	0.011	0.00025	0.0030	0.013	0.00075	--	0.0034	0.0023	0.0060	Φ40×20
NCS HS52725-5	Pb-Sb alloy	6.34	0.0060	0.011	0.00034	0.0058	0.015	0.0012	0.00012	0.0062	0.0029	0.0080	Φ40×20
NCS HS52725-6	Pb-Sb alloy	7.61	0.017	0.0037	0.00007	0.0014	0.0055	0.00088	--	0.00048	0.00019	0.00067	Φ40×20
NCS HS52725-7	Pb-Sb alloy	4.15	0.30	0.10	0.00087	0.013	0.062	--	--	0.00012	0.00022	0.070	Φ40×20
NCS HS52725-8	Pb-Sb alloy	1.47	0.0023	0.0080	0.00009	0.0014	0.010	--	--	--	--	0.0057	Φ40×20
		As	Pb										
NCS HS52725-1	Pb-Sb alloy	0.0035	remain										
NCS HS52725-2	Pb-Sb alloy	0.0040	remain										
NCS HS52725-3	Pb-Sb alloy	0.0064	remain										
NCS HS52725-4	Pb-Sb alloy	0.0092	remain										
NCS HS52725-5	Pb-Sb alloy	0.012	remain										
NCS HS52725-6	Pb-Sb alloy	0.0071	remain										
NCS HS52725-7	Pb-Sb alloy	0.0029	remain										
NCS HS52725-8	Pb-Sb alloy	0.0014	remain										
Number	Name	Chemical Composition(%)										Unit Size (mm)	
		Sb	Sn	Cu	Se	Ag	Bi	Zn	Fe	Ni	Cd		Te
NCS HS52726-1	Pb-Sb-Sn alloy	2.22	0.20	0.014	0.018	0.0013	0.0070	0.00024	0.00010	0.00012	0.00022	0.0012	Φ40×20
NCS HS52726-2	Pb-Sb-Sn alloy	3.02	0.21	0.056	0.00062	0.0010	0.0055	0.00035	--	0.00021	0.00049	0.00029	Φ40×20
NCS HS52726-3	Pb-Sb-Sn alloy	4.55	0.060	0.088	0.0018	0.0064	0.030	0.00097	--	0.00071	0.00073	0.011	Φ40×20
NCS HS52726-4	Pb-Sb-Sn alloy	5.76	0.089	0.051	0.0017	0.016	0.051	0.0011	--	0.00020	0.00015	0.045	Φ40×20
NCS HS52726-5	Pb-Sb-Sn alloy	7.62	0.11	0.045	--	0.0040	0.0036	0.0018	--	0.00068	0.0026	0.0033	Φ40×20
NCS HS52726-6	Pb-Sb-Sn alloy	2.24	0.22	0.018	0.022	0.0065	0.024	0.00007	0.00019	0.0013	0.00094	0.00055	Φ40×20
		As	Pb										
NCS HS52726-1	Pb-Sb-Sn alloy	0.12	remain										
NCS HS52726-2	Pb-Sb-Sn alloy	0.16	remain										
NCS HS52726-3	Pb-Sb-Sn alloy	0.039	remain										
NCS HS52726-4	Pb-Sb-Sn alloy	0.018	remain										
NCS HS52726-5	Pb-Sb-Sn alloy	0.026	remain										
NCS HS52726-6	Pb-Sb-Sn alloy	0.26	remain										

Section 8 Nonferrous Metal(Disk)

3)Other Metals

Number	Name	Sb	Sn	Cu	Se	Ag	Bi	Fe	Ni	Cd	Te	As	Pb	Unit Size (mm)
NCS HS52741	Pb-Sn alloy	0.0014	2.08	0.061	0.0006	0.017	0.050	0.0002	0.00014	0.0026	0.062	0.016	remain	Φ40×25
Number	Name	Chemical Composition(Percent)										Unit Size (mm)		
		Al	Zn	Mn	Be	Si	Fe	Cu	Ni					
NCS HS 91711-1	Magnesium Alloy	3.04	1.21	0.082	0.0032	0.037	0.035	0.0096	0.0006					Φ40×25
NCS HS 91711-2	Magnesium Alloy	5.06	0.954	0.256	0.0022	0.100	0.028	0.085	0.0047					Φ40×25
NCS HS 91711-3	Magnesium Alloy	6.97	0.709	0.374	0.0017	0.183	0.018	0.151	0.0096					Φ40×25
NCS HS 91711-4	Magnesium Alloy	9.00	0.463	0.567	0.0013	0.285	0.010	0.222	0.015					Φ40×25
NCS HS 91711-5	Magnesium Alloy	10.39	0.201	(0.71)	0.0007	0.411	0.0081	0.307	0.019					Φ40×25
Number	Name	Chemical Composition(Percent)										Unit Size (mm)		
		Cd	Se	Te	Sb	As	Sn	Cu	Bi	Zn	Ag			
NCS HS 45722-1	Pb-Sb Alloy	0.00055	0.0065	0.0056	0.315	0.0023	0.0022	0.012	0.0036	0.0004	0.0051			Φ45×25
NCS HS 45722-2	Pb-Sb Alloy	0.004	0.012	0.012	1.46	0.011	0.0014	0.057	0.012	0.0011	0.011			Φ45×25
NCS HS 45722-3	Pb-Sb Alloy	0.0061	0.015	0.045	3.02	0.022	0.033	0.085	0.035	0.00075	0.051			Φ45×25
NCS HS 45722-4	Pb-Sb Alloy	0.0082	0.0036	0.055	5.02	0.04	0.057	0.12	0.056	0.0058	0.21			Φ45×25
NCS HS 45722-5	Pb-Sb Alloy	0.02	0.0032	0.065	7.05	0.175	0.362	0.253	0.088	0.015	0.43			Φ45×25
Number	Name	Al	Cd	Fe	Pb	Cu	Sn	Chemical Composition(%)						Unit Size (mm)
NCS HS11905a	Zinc Alloy	0.117	0.0048	0.018	0.0043	0.005	0.0048							30×30×25
Number	Name	Al	V	Fe	Si	C	Chemical Composition(%)							Unit Size (mm)
NCS HS93704-1	Titanium Alloy	3.9	5.65	0.39	0.277	0.158								36×25
NCS HS93704-2	Titanium Alloy	4.67	5.01	0.314	0.196	0.119								36×25
NCS HS93704-3	Titanium Alloy	5.38	3.41	0.239	0.115	0.095								36×25
NCS HS93704-4	Titanium Alloy	6.48	4.46	0.143	0.052	0.051								36×25
NCS HS93704-5	Titanium Alloy	6.78	3.85	0.131	0.085	0.023								36×25
NCS HS93704-6	Titanium Alloy	7.03	2.75	0.073	0.031	0.019								36×25

Section 9 Coal(Powder)

Number	Name	Total Sulfur (%)	Ash (%)	Volatile Matter (%)	Calorific Value (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True Specific Gravity (20°C)	Coal Type	Unit Size (g)
NCS FC11001	Coal	0.25	10.21	30.31	28.38	72.34	3.99	1.01	1.48	bitumite	50
NCS FC11002	Coal	0.41	6.44	30.82	28.51	74	3.83	0.84	1.51	bitumite	50
NCS FC11003	Coal	0.47	20.25	26.57	22.43	61.32	2.7	0.62	1.73	bitumite	50
NCS FC11004	Coal	0.78	9.23	32.28	26.57	70.18	3.56	0.83	1.56	bitumite	50
NCS FC11005	Coal	0.97	10.28	30.54	26.25	69.75	3.31	0.75	1.6	bitumite	50
NCS FC11006	Coal	1.56	16.26	18.85	27.39	71.06	3.21	0.99	1.57	bitumite	50
NCS FC11007	Coal	1.72	12.56	31.55	25.31	67.09	3.29	0.76	1.63	bitumite	50
NCS FC11008	Coal	1.59	25.64	28.81	22.12	57.2	3.28	0.82	1.68	bitumite	50
NCS FC11009	Coal	1.81	15.63	23.29	26.61	69.09	3.32	0.92	1.57	bitumite	50
NCS FC11010	Coal	0.44	13.47	10.67	30.4	78.36	3.23	1.13	1.54	anthracite	50
NCS FC11011	Coal	1.08	9.2	10.49	32.2	82.11	3.41	1.21	1.45	anthracite	50
NCS FC11012	Coal	1.55	10.84	9.28	31.45	80.98	3.23	0.95	1.47	anthracite	50
NCS FC11013	Coal	0.63	6.96	32.63	27.78	72.03	3.77	0.85	1.52	bitumite	50
NCS FC11014	Coal	0.41	6.19	34.14	30.54	76.38	4.46	0.97	1.41	bitumite	50
Number	Name	Deformation temperature		Softening Temperature		Hemisphering Temperature		Fluid temperature			Unit Size (g)
NCS FS82002	Fusibility of Coal Ash	1171		1198		1217		1265			50
NCS FS82003	Fusibility of Coal Ash	1148		1178		1196		1251			50
NCS FS82004	Fusibility of Coal Ash	1198		1236		1256		1291			50
NCS FS82005	Fusibility of Coal Ash	1164		1201		1245		1298			50
NCS FS82006	Fusibility of Coal Ash	1348		1392		1402		1430			50
Number	Name	Hg	As	F	P*	Cl*					Unit Size (g)
NCS FC82023	Hg, As, P, F, Cl in Coal	0.576	16	148	0.021	0.03					50
NCS FC82024	Hg, As, P, F, Cl in Coal	0.794	13	153	0.022	0.01					50
NCS FC82025	Hg, As, P, F, Cl in Coal	0.975	21	179	0.026	0.047					50

Section 9 Coal(Powder)

Number		Name	Total Sulfur	Ash	Volatile matter	Chemical Composition(Percent)					True Specific Gravity	Coal Type	Unit Size (in g)		
NCS FC 28001L	Coal		0.52	9.80	24.10	31.70	78.77	4.33	1.32	1.32	1.32	bitumite	50		
NCS FC 28001m	Coal		0.56	9.60	24.03	32.09	79.24	4.35	1.31	1.31	1.31	bitumite	50		
NCS FC 28002j	Coal		1.61	23.69	30.22	23.75	60.00	3.67	1.07	1.07	1.07	bitumite	50		
NCS FC 28003f	Coal		0.28	16.27	6.51	26.38	78.10	0.93	0.23	0.23	0.23	anthracite	50		
NCS FC 28003g	Coal		0.39	24.38	5.39	23.93	70.95	0.76	0.30	0.30	0.30	anthracite	50		
NCS FC 28004e	Coal		1.00	28.07	4.97	23.78	66.70	1.43	0.72	0.72	0.72	anthracite	50		
NCS FC 28004f	Coal		1.13	13.80	7.02	29.43	79.13	2.23	1.13	1.13	1.13	anthracite	50		
NCS FC 28005e	Coal		1.76	14.28	8.69	29.61	77.83	2.73	0.85	0.85	0.85	anthracite	50		
NCS FC 28006j	Coal		0.88	17.44	30.99	26.88	66.99	4.07	1.19	1.19	1.19	bitumite	50		
NCS FC 28007g	Coal		1.83	14.70	34.51	27.51	68.05	4.20	1.20	1.20	1.20	bitumite	50		
NCS FC 28008e	Coal		2.78	15.54	35.09	28.13	68.22	4.44	1.22	1.22	1.22	bitumite	50		
NCS FC 28009f	Coal		4.34	25.42	21.68	24.71	61.46	3.34	1.06	1.06	1.06	bitumite	50		
NCS FC 28010e	Coal		1.36	15.75	33.22	26.80	66.92	4.09	1.17	1.17	1.17	bitumite	50		
NCS FC 28011d	Coal		2.23	20.40	6.39	26.35	72.11	1.84	0.85	0.85	0.85	anthracite	50		
NCS FC 28012c	Coal		3.07	19.70	10.77	27.37	70.39	2.90	1.10	1.10	1.10	anthracite	50		
NCS FC 28017a	Coal		0.26	14.56	5.77	27.12	80.19	0.98	0.23	0.23	0.23	anthracite	50		
Number		Name	Ts	Ash	Volatile	Chemical Composition(Percent)							Unit Size (in g)		
NCS FC 59001	Coke		0.63	7.22	1.39								60		
NCS FC 59002	Coke		0.47	12.62	1.50								60		
Number		Name	M _{ad} (%)	A _{ad} (%)	A _d (%)	V _{ad} (%)	V _d (%)	S _{t,ad} (%)	S _{t,d} (%)	O _{Gr,ad} (MJ/kg)	Q _{Gr,d} (MJ/kg)		Unit Size (in g)		
NCS FC 62001	Bituminous Coal for Cement		3.76	21.58	22.42	22.90	23.79	1.43	1.49	24.37	25.32		20		
NCS FC 62002	Anthracite Coal for Cement		3.70	25.18	26.15	5.81	6.03	0.21	0.22	22.36	23.22		20		
Number		Name	As*	P	Cl	F*	Chemical Composition(Percent)						Unit Size (mm)		
NCS FC 82001	Coal		15	0.03	1								50		
NCS FC 82002	Coal		34	0.007									50		
NCS FC 82003	Coal		51	0.092									50		
NCS FC 82004	Coal				0.010								50		
NCS FC 82005	Coal				0.057								50		
NCS FC 82006	Coal				0.110								50		
NCS FC 82008	Fluorine in coal					864.00							50		
*Mass Fraction Substance(10 ⁻⁶)															
Number		Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Chemical Composition(Percent)						Unit Size (in g)		
NCS FC 82012b	Coal Ash		46.99	29.45	7.95	8.73	1.03	0.69	1.28	1.16	0.79	0.28	30		
Number		Name	Q _{gr,d} (MJ/kg)	St,d	Ad	Vd	Chemical Composition(Percent)						Unit Size (in g)		
NCS FC 28019b	coke		29.08	0.67	11.64	1.31	5.52	4.17	0.45	0.094	0.55	0.18	0.058	50	
NCS FC 28020b	coke		28.26	0.76	14.42	1.78	6.52	4.95	0.52	0.15	1.22	0.22	0.05	0.079	50
NCS FC 28022b	coke		29.10	0.81	11.90	1.68	5.63	3.98	0.55	0.16	0.63	0.18	0.084	0.069	50
NCS FC 28023	coke		27.56	1.44	16.20	1.80	8.17	5.28	0.57	0.097	0.96	0.20	0.067	0.11	50
			MnO	SrO	P	Cr	Ni	Cu	V	Pb	As	Cl			
NCS FC 28019b	coke		0.0049	0.01	0.027	0.0015	0.001	0.0018	0.0027	0.0009	0.0001	0.024			
NCS FC 28020b	coke		0.0052	0.017	0.037	0.0022	0.0008	0.0027	0.0038	0.0011	0.00014	0.02			
NCS FC 28022b	coke		0.013	0.011	0.018	0.0022	0.0008	0.002	0.0032	0.0008	0.0002	0.049			
NCS FC 28023	coke		0.0044	0.0084	0.018	0.0021	0.001	0.0018	0.0037	0.0008	0.00024	0.022			

Section 9 Coal(Powder)

Number		Name	St, d	Ad	Vd	Chemical Composition(Percent)					Unit Size (mm)	
						Qgr,d(MJ/kg)	P					
NCS FC 28024	coke		0.41	15.43	1.98	28.17	0.041				50	
NCS FC 28025	coke		0.62	11.5	1.31	29.32	0.021				50	
NCS FC 28026	coke		0.79	12.18	1.36	28.95	0.031				50	
NCS FC 28027	coke		0.89	14.83	1.65	28.12	0.026				50	
Number		Name	Ts	Ash	Volatile	Chemical Composition(Percent)					Unit Size (in g)	
NCS FC 93001	Coke		0.60	12.88	1.75						50	
NCS FC 93002	Coke		0.78	13.70	2.00						50	
NCS FC 93006	Coke		2.15	21.53	4.92						50	
Number		Name	Certified Value(HGI)			Chemical Composition					Unit Size (in g)	
NCS AG 82001	Hadgrove Grindability Index of Coal			34							250	
NCS AG 82002	Hadgrove Grindability Index of Coal			59							250	
NCS AG 82003	Hadgrove Grindability Index of Coal			88							250	
NCS AG 82004	Hadgrove Grindability Index of Coal			121							250	
Number		Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True specific Gravity(20°C)	Coal Type	Unit Size (in g)
NCS FC 28101	Coal		0.2	3.95	6.64	34.34	90.27	3.01	0.6	1.47	anthracite	50
NCS FC 28102	Coal		0.19	6.46	7.9	33.1	87.47	2.86	0.6	1.5	anthracite	50
NCS FC 28103	Coal		0.36	10.51	9.45	31.8	81.55	3.33	1.3	1.47	anthracite	50
NCS FC 28104	Coal		0.41	10.09	11	32.04	81.6	3.52	1.34	1.45	anthracite	50
NCS FC 28105	Coal		1.06	9.61	12.21	32.31	81.54	3.7	1.16	1.43	anthracite	50
NCS FC 28106	Coal		1.72	8.56	31.92	32.98	79.09	4.95	1.38	1.35	bitumite	50
NCS FC 28107	Coal		0.67	10.41	15.3	31.64	79.89	3.8	1.12	1.43	bitumite	50
NCS FC 28108	Coal		0.57	13.68	30.84	29.9	72.94	4.46	1.26	1.42	bitumite	50
NCS FC 28109	Coal		0.58	11.98	11.3	30.66	79.42	3.28	1.09	1.49	anthracite	50
NCS FC 28110	Coal		0.87	8.42	32.94	30.92	75.96	4.56	1.33	1.41	bitumite	50
NCS FC 28111	Coal		1.28	25.19	28.39	24.35	60.24	3.37	1.04	1.57	bitumite	50
NCS FC 28112	Coal		2.1	8.08	33.7	33.04	78.75	5.01	1.31	1.33	bitumite	50
NCS FC 28113	Coal		0.27	7.06	33.4	30.03	74.8	4.47	1.02	1.41	bitumite	50
NCS FC 28114	Coal		0.2	4.66	33.07	30.73	76.36	4.54	1.08	1.4	bitumite	50
NCS FC 28115	Coal		0.42	6.38	32.22	31.05	77.44	4.42	1.21	1.41	bitumite	50
NCS FC 28116	Coal		0.54	6.08	32.34	31.82	78.68	4.59	1.34	1.39	bitumite	50
NCS FC 28117	Coke		0.63	14.83	1.3	28.28						50
NCS FC 28118	Coke		0.87	12.08	1.66	29.25						50
NCS FC 28119	Coke		0.81	14.43	1.34	28.3						50
NCS FC 28120	Coke		0.68	14.05	1.43	28.55						50
NCS FC 28121	Coke		0.75	13.29	1.14	28.76						50
Number		Name	Si	Al	Fe	Chemical Composition(Percent)					Unit Size (in g)	
						Ca	Mg	P	K	Na	Ti	
NCS FC 28122	Inorganic elements in Coal		0.47	0.25	1.79	0.85	0.24	0.0029	0.016	0.081	0.01	50
NCS FC 28123	Inorganic elements in Coal		1.86	1.88	0.35	0.74	0.081	0.066	0.026	0.11	0.096	50
NCS FC 28124	Inorganic elements in Coal		1.77	1.75	0.34	0.79	0.071	0.044	0.02	0.13	0.079	50
NCS FC 28125	Inorganic elements in Coal		2.69	2.27	0.24	0.28	0.05	0.013	0.09	0.048	0.09	50
NCS FC 28126	Inorganic elements in Coal		1.01	0.83	0.32	0.65	0.06	0.019	0.01	0.034	0.046	50
NCS FC 28127	Inorganic elements in Coal		5.61	3.47	1.02	1.88	0.28	0.01	0.29	0.052	0.018	50
NCS FC 28128	Inorganic elements in Coal		1.64	1.22	0.86	0.19	0.059	0.0044	0.043	0.026	0.059	50

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Number	Name	Chemical Composition(Percent)									Unit Size (in g)		
		V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb			
NCS FC 28122	Inorganic elements in Coal	0.0001	0.022	0.0002	0.0008	0.0008		0.0002	(<0.0001)	0.0002		50	
NCS FC 28123	Inorganic elements in Coal	0.0012	0.003	0.0012	0.0004	0.0008	(0.001)	0.001	(<0.0001)	0.0016		50	
NCS FC 28124	Inorganic elements in Coal	0.0011	0.0016	0.0012	0.0004	0.0008		0.0007	(<0.0001)	0.0016		50	
NCS FC 28125	Inorganic elements in Coal	0.0033	0.0009	0.0017	0.0011	0.0018		0.0005	(<0.0001)	0.0016		50	
NCS FC 28126	Inorganic elements in Coal	0.0011	0.008	0.0008	0.0003	0.0005		0.0005	0.0002			50	
NCS FC 28127	Inorganic elements in Coal	0.006	0.019	0.0023	0.0009	0.0016	0.004	0.0023				50	
NCS FC 28128	Inorganic elements in Coal	0.0028	0.0026	0.0012	0.0004	0.0008	(<0.001)	0.0008				50	
Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		Si	Al	Fe	Ca	Mg	P	K	Na	Ti	V		Mn
NCS FC 28129	Element in coke	2.97	2.35	0.75	0.6	0.11	0.02	0.093	0.13	0.12	0.0041	0.021	50
NCS FC 28130	Element in coke	2.35	1.96	0.63	0.52	0.11	0.022	0.061	0.063	0.099	0.0034	0.015	50
NCS FC 28131	Element in coke	3.22	2.72	0.51	0.29	0.046	0.015	0.094	0.05	0.12	0.0027	0.008	50
Number	Name	Chemical Composition(Percent)								Unit Size (in g)			
		Cu	Co	Ni	Zn	Cr	Cd	Pb					
NCS FC 28129	Element in coke	0.0021	0.0007	0.0015	0.0011	0.0015		0.0014					
NCS FC 28130	Element in coke	0.0017	0.0006	0.0012	0.0011	0.0012	<0.0001						
NCS FC 28131	Element in coke	0.0016	0.0007	0.0013	0.0018	0.0011	<0.0001						
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	P (%)							Unit Size (in g)
NCS FC 28132	coke	0.50	11.39	2.80	30.23	0.016							50
NCS FC 28133	coke	1.00	12.30	1.79	29.18	0.024							50
NCS FC 28134	coke	1.19	12.70	1.95	29.04	0.024							50
Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅		MnO
NCS FC 28135	Ash of Coke	42.87	29.95	7.23	5.67	1.25	0.31	1.51	2.36	1.44	0.049	0.18	5
NCS FC 28136	Ash of Coke	41.61	30.666	7.51	6	1.5	0.41	1.22	1.36	1.41	0.05	0.16	5
NCS FC 28137	Ash of Coke	47.81	35.62	5.02	2.82	0.53	0.24	1.57	0.94	1.41	0.033	0.07	5
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	TRUE Specific Gravity(20°C)"	Coal Type		Unit Size (in g)	
NCS FC 28138	Coal	1.42	44.23	11.11	18.59	47.12	2.48	0.75	1.79		anthracite	50	
NCS FC 28139	Coal	1.34	22.8	18.09	27.27	67.41	3.68	1.05	1.51		bitumite	50	
NCS FC 28140	Coal	1.29	25.88	30.31	22.71	58.12	3.4	1.04	1.62		bitumite	50	
NCS FC 28141	Coal	3.04	29.13	9.99	23.72	60.53	2.73	0.86	1.68		anthracite	50	
NCS FC 28142	Coal	4.54	34.45	12.38	22.18	55.14	2.79	0.85	1.71		bitumite	50	
NCS FC 28143	Coal	6.62	33.01	11.1	21.92	54.74	2.53	0.76	1.78		anthracite	50	
NCS FC 28144	Coal	1.56	73.37	9.44	6.77	18.01	1.45	0.28	2.29		coal waste rock	50	
Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅		MnO
NCS FC 28145	Coal ash	15.66	7.34	39.61	18.37	6.05	0.1	0.6	3.37	0.26	0.0042	0.44	5
NCS FC 28146	Coal ash	37.86	33.71	4.74	9.9	1.27	1.44	0.6	2.9	1.56	0.02	0.037	5
NCS FC 28147	Coal ash	37.52	32.78	4.81	10.97	1.17	1	0.48	3.5	1.34	0.019	0.02	5
NCS FC 28148	Coal ash	48.03	35.8	2.81	3.27	0.69	0.25	1.81	1.08	1.29	0.049	0.0073	5
NCS FC 28149	Coal ash	35.54	25.92	7.56	14.92	1.63	0.72	0.39	1.51	1.3	0.032	0.017	5
NCS FC 28150	Coal ash	47.64	26.03	5.79	10.44	1.87	0.091	2.81	0.56	1.24	0.042	0.097	5
NCS FC 28151	Coal ash	43.42	28.53	15.18	3.33	1.21	0.12	1.29	0.87	1.25	0.062	0.042	5
Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		SiO ₂	CaO	MgO	Al ₂ O ₃	Fe ₂ O ₃	SO ₃	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅		
NCS FC28038	Coal Ash	21.22	15.69	5.09	10.72	35.34	7.46	0.44	0.22	1.84	0.16		20
NCS FC28039	Coal Ash	52.6	8.04	1.16	27.37	7.43	0.46	0.76	0.83	0.28	0.32		20
NCS FC28040	Coal Ash	56.22	8.6	1.4	20.88	8.7	0.51	0.66	1.25	0.52	0.36		20
NCS FC28041	Coal Ash	45.42	7.2	1.15	35.96	5.15	0.08*	1.32	0.7	0.82	0.89		20
Number	Name	Chemical Composition(Percent)						Unit Size (in g)					
		P (%)	Cl (%)	As (µg/g)	F (µg/g)	Hg (µg/g)							
NCS FC28042	P, As, F, Cl, Hg in Coal	0.013	0.043	10	256	0.25							50g
NCS FC28043	P, As, F, Cl, Hg in Coal	0.008	0.051	22	158	0.03							50g
NCS FC28044	P, As, F, Cl, Hg in Coal	0.121	0.038	1.4	232	0.08							50g
NCS FC28045	P, As, F, Cl, Hg in Coal	0.055	0.052	6.4	179	0.36							50g

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Number	Name	Si	Al	Fe	Ca	Chemical Composition(Percent)							Unit Size (in g)	
NCS FC 28152	Element of Coal waste rock	20.59	10.76	2.57	0.34	0.53	0.026	1.27	0.15	0.012	0.023	0.44	50	
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Chemical Composition(Percent)							Unit Size (in g)	
NCS FC 28153	Ash of Coal waste rock	60.03	27.71	5.01	0.65	1.2	0.082	4.18	0.53	1.04	0.028	0.041	5	
Number	Name	St.d	Ad	Vd	Qgr,d(MJ/kg)	Chemical Composition(Percent)							Unit Size (in g)	
NCS FC 28201	Coal	0.47	10.45	17.7	31.57	bitumite							50	
NCS FC 28202	Coal	1.05	8.65	33.36	30.77	bitumite							50	
NCS FC 28203	Coal	0.71	10.36	20.69	31.66	bitumite							50	
NCS FC 28204	Coal	0.96	8.09	34.25	31.34	bitumite							50	
NCS FC 28205	Coal	0.31	14.49	11.39	29.98	anthracite							50	
NCS FC 28206	Coal	0.86	14.42	28.56	26.73	bitumite							50	
NCS FC 28207	Coal	0.43	16.26	7.26	26.1	anthracite							50	
NCS FC 28208	Coal	1.03	15.48	20.57	29.19	bitumite							50	
NCS FC 28209	Coal	1.76	27.33	8.21	23.96	anthracite							50	
NCS FC 28210	Coal	3.17	25.9	8.40	24.47	anthracite							50	
NCS FC 28211	Coal	0.88	13.41	9.08	30.23	anthracite							50	
NCS FC 28212	Coal	0.53	8.52	25.65	30.94	bitumite							50	
NCS FC 28213	Coal	1.49	9.88	36.2	30.76	bitumite							50	
NCS FC 28214	Coal	1.66	27.85	29.21	23.63	bitumite							50	
NCS FC 28215	Coal	2.17	25.2	28.79	24.83	bitumite							50	
NCS FC 28216	Coal	2.79	8.7	10.78	32.34	anthracite							50	
NCS FC 28217	Coal	1.79	8.68	36.06	31.33	bitumite							50	
NCS FC 28218	Coal	1.35	14.58	6.16	29.26	anthracite							50	
NCS FC 28219	Coal	0.28	6.1	31.24	30.09	bitumite							50	
NCS FC 28220	Coal	4.03	16.52	11.15	28.67	anthracite							50	
NCS FC 28221	Coal	4.04	18.98	32	27.79	bitumite							50	
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	Chemical Composition(Percent)							Unit Size (in g)	
NCS FC 28154	Ash of Coal	53.17	32.02	6.47	2.28	0.9	0.19	1.37	0.41	1.34	0.027	0.035	0.78	5
Number	Name	Fusibility(°C)			Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size					
NCS FS28001	Fusibility of Coal Ash	Atmosphere			1161	1190	1198	1204	5g					
		Mildly reducing atmosphere	Certified Value											
NCS FS28002	Fusibility of Coal Ash	Oxidizing atmosphere	Certified Value		1211	1230	1239	1252						
		Mildly reducing atmosphere	Certified Value		1217	1340	1357	1369						
NCS FS28003	Fusibility of Coal Ash	Oxidizing atmosphere	Certified Value		1356	1408	1420	1445						
		Mildly reducing atmosphere	Certified Value		1285	1314	1322	1340						
NCS FS28003	Fusibility of Coal Ash	Oxidizing atmosphere	Certified Value		1314	1345	1360	1381						
Number	Name	Fusibility(°C)			Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size					
NCS FS 91001c	Fusibility of coal ash	Atmosphere			1147	1219	1251	1305	30g					
		Mildly reducing atmosphere	Certified Value											
		Oxidizing atmosphere	Certified Value		1321	1345	1358	1376						
		Strong reducing atmosphere	Certified Value		1376	1407	1427	1464						

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Number	Name	Total Sulfur (%)	Ash (%)	Volatile matter(%)	Calorific Value (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True Specific Gravity (20°C)	Unit Size (in g)
NCS FC 28155	Coal	1.93	10.8	10.53	31.14	79.7	3.35	1.14	1.46	50
NCS FC 28156	Coal	3.85	13.1	10.19	29.85	76.21	3.23	0.88	1.48	50
NCS FC 28157	Coal	1.54	11.1	9.32	31.05	79.89	3.33	1.21	1.47	50
NCS FC 28158	Coal	0.45	21.77	7.47	26.76	70.73	2.51	0.87	1.66	50
NCS FC 28159	Coal	0.28	21.04	10.57	25.8	69.88	2.33	0.84	1.68	50
NCS FC 28160	Coal	1.3	8.93	8.94	31.99	82.3	3.35	1.24	1.45	50
NCS FC 28161	Coal	0.51	12.58	8.87	31.02	79.77	3.29	1.03	1.47	50
NCS FC 28162	Coal	2.5	13.9	11.12	29.8	76.3	3.31	1.07	1.49	50
NCS FC 28163	Coal	0.87	10.82	9.22	31.45	80.79	3.35	1.15	1.46	50
NCS FC 28164	Pitch Coke	0.26	0.17	1.17					1.97	50
NCS FC 28165	Petroleum Coke	2.6	0.37	1.01					2.06	50
NCS FC 28166	Petroleum Coke	1.05	0.3	19.64					1.31	50
NCS FC 28167	Petroleum Coke	1.75	0.35	9.11					1.36	50
NCS FC 28168	Petroleum Coke	1.46	0.33	13.59					1.33	50
Number	Name	Total Sulfur St,d	Organic Sulfur So,d	Sulphates Sulfur Ss,d		Pyrites Sulfur Sp,d				Unit Size (in g)
NCS FC 28169	Forms of Sulfur in Coal	0.19	0.18			0.011				50
NCS FC 28170	Forms of Sulfur in Coal	1.64	0.79	0.37		0.48				50
NCS FC 28171	Forms of Sulfur in Coal	1.34	0.36	0.29		0.69				50
Number	Name	Caking index								Unit Size (in g)
NCS FC82026b	Caking index for bituminous Coal	15								25
NCS FC82027c	Caking index for bituminous Coal	25								25
NCS FC82028c	Caking index for bituminous Coal	84								25
NCS FC82029c	Caking index for bituminous Coal	90								25
Number	Name	F (µg/g)	Cl (%)	As (µg/g)	Hg (µg/g)	P (%)	Unit Size (in g)			
NCS FC28172	Harmful elements in Coal	72	0.013	1.2	<0.10	0.003	50			
NCS FC28173	Harmful elements in Coal	180	0.043	5.3	0.42	0.015	50			
NCS FC28174	Harmful elements in Coal	90	0.027	1.5	<0.10	0.013	50			
NCS FC28175	Harmful elements in Coal	157	0.011	1.4	0.16	0.055	50			
NCS FC28176	Harmful elements in Coal	122	0.046	2.6	0.23	0.028	50			

Section 10 Environmental

Number	Name	Chemical Composition									Unit Size (in g)
		Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})	Br(10^{-6})	Ca(10^{-2})	Cd(10^{-9})	
NCS ZC 73016	Chicken	0.016	0.109	0.76	1.5	(1.3)	1.3	1.6	0.022	(5)	35
NCS ZC 73017	Apple	0.007	0.02	19	2.5	(1.0)	(2.5)	(0.2)	0.049	5.8	35
NCS ZC 73016	Chicken	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	Dy(10^{-9})	Er(10^{-9})	Er(10^{-9})	Fe(10^{-6})
		0.06	0.153	(0.010)	0.59	0.07	1.46	1.1	(0.8)	(0.7)	31
NCS ZC 73017	Apple	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	Dy(10^{-9})	Er(10^{-9})	Er(10^{-9})	Fe(10^{-6})
		0.025	(0.0080)	0.026	0.3	(0.02)	2.5	(1.1)	(0.65)	(0.7)	16
NCS ZC 73016	Chicken	Gd(10^{-9})	Ge(10^{-9})	Hg(10^{-9})	Ho(10^{-9})	I(10^{-6})	K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})
		(1.4)	(2)	3.6	(0.26)	(0.08)	1.46	0.024	0.034	(0.10)	0.128
NCS ZC 73017	Apple	Gd(10^{-9})	Ge(10^{-9})	Hg(10^{-9})	Ho(10^{-9})	I(10^{-6})	K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})
		0.95		(2)	(0.25)	0.12	0.77	0.014	0.115		0.039
NCS ZC 73016	Chicken	Mn(10^{-6})	Mo(10^{-6})	N(10^{-2})	Na(10^{-6})	Nb(10^{-6})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})
		1.65	0.11	14.8	0.144	(0.006)	0.0095	0.15	0.96	0.11	2.8
NCS ZC 73017	Apple	Mn(10^{-6})	Mo(10^{-6})	N(10^{-2})	Na(10^{-6})	Nb(10^{-6})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})
		2.7	0.08	0.31	0.116		(0.006)	0.14	0.066	0.084	1.8
NCS ZC 73016	Chicken	Rb(10^{-6})	S(10^{-2})	Sb(10^{-6})	Sc(10^{-9})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-9})
		33	0.86		(4.5)	0.49	(0.013)	1.3	0.64	(0.23)	(4.5)
NCS ZC 73017	Apple	Rb(10^{-6})	S(10^{-2})	Sb(10^{-6})	Sc(10^{-9})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-9})
		5	0.063	(0.006)		(0.018)	0.005	1.5	6.9		4
NCS ZC 73016	Chicken	Tl(10^{-9})	Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)		
		(14)	(0.11)	(3)	(0.06)	0.007	(0.7)	26	(5.0)		
NCS ZC 73017	Apple	Tl(10^{-9})	Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)		
		(1.8)	(0.12)	8.2	(0.028)	0.008	(0.66)	2.1	(2.4)		
Number	Name	Content(10^{-6})									Unit Size (in g)
		Ag	Al*	As	B	Ba	Be**	Bi**	Br	Ca*	
NCS ZC73008a	Rice	0.004±0.001	0.015±0.001	0.08±0.01	0.7±0.2	0.15±0.03	(0.7)	(1.4)		0.007±0.001	30
NCS ZC73009a	Wheat	0.002±0.001	0.013±0.003	0.04±0.01	-0.6	2.3±0.2		1.7±0.6		0.030±0.002	30
NCS ZC73012a	Cabbage	0.003±0.001	0.018±0.004	0.05±0.01	26±3	6.3±0.6	1.2±0.4	(2)	(4)	0.55±0.02	25
NCS ZC73013a	Spinage	0.018±0.002	0.16±0.03	0.54±0.06	30.6±4.2	10.9±1.7	40±7	16±3	9.6±2.7	0.88±0.09	20
NCS ZC73014a	Tea	0.010±0.002	0.25±0.02	0.10±0.02	12.6±0.8	32±3	50±8	13±2	(3)	0.47±0.02	25
NCS ZC73015a	Milk Powder		(0.01)	0.03±0.01	2.7±0.4	0.59±0.06	(0.5)	(10)	(6)	0.94±0.03	30
NCS ZC73029a	Rice	0.003±0.001	(0.02)	0.12±0.02	0.72±0.13	0.31±0.07	(0.6)	(1.30)	(0.50)	0.007±0.002	30
NCS ZC73036a	Green tea	0.008±0.002	0.12±0.02	0.16±0.02	11±2	32±3	12±2	31±5	3.1±0.8	0.34#(0.32-0.37)	25
NCS ZC73008a	Rice	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		53±4	0.004±0.002		0.006±0.002	-0.08	0.003±0.001	3.0±0.2	0.32±0.08	0.19±0.05	(0.2)
NCS ZC73009a	Wheat	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		21±3	(0.01)	(0.08)	0.006±0.001	0.09±0.03	0.007±0.001	3.0±0.3	0.7±0.1	0.32±0.06	
NCS ZC73012a	Cabbage	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		21±3	0.02±0.01	(0.4)	0.06±0.01	0.49±0.08	0.14±0.01	3.1±0.2	1.1±0.3	0.53±0.12	(2)
NCS ZC73013a	Spinage	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		190±20	1.5±0.2		0.49±0.03	9.0±1.3	0.23±0.04	10.4±0.8	85±10	42±6	26±3
NCS ZC73014a	Tea	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		46±5	1.3±0.2	0.050±0.004	0.28±0.02	0.79±0.11	0.19±0.02	8.3±0.5	130±20	80±10	27#(25-29)
NCS ZC73015a	Milk Powder	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		(2)	(5)**		(0.04)	(0.2)	0.035±0.003	0.50±0.11	(0.20)	(0.1)	(0.3)
NCS ZC73029a	Rice	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		320±40	(3)**		0.010±0.002	(0.08)	0.023±0.003	2.4±0.2	0.25#(0.20-0.37)	0.18±0.05	0.14±0.05
NCS ZC73036a	Green tea	Cd**	Ce	Cl*	Co	Cr	Cs	Cu	Dy**	Er**	Eu**
		200±20	0.51±0.07	0.05±0.01	0.23±0.02	0.6±0.1	0.42±0.05	13.2±0.9	54±8	33±5	20±4
NCS ZC73008a	Rice	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			4.0±0.8	(0.3)	(1.8)	4.2±0.6	(0.1)		0.090±0.005	(2.6)**	0.016±0.004
NCS ZC73009a	Wheat	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			25±2	1.0±0.3	(1.4)	(1.6)	(0.2)		0.22±0.01	0.013±0.003	0.03±0.01
NCS ZC73012a	Cabbage	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			56±5	1.1±0.2	(3)	2.1±0.7	0.22±0.05	0.7±0.2	1.49±0.04	0.02±0.01	0.33±0.04
NCS ZC73013a	Spinage	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
		(13)	0.093±0.007*	120±10	21±8	21±5	16±3	0.6±0.2	4.0±0.2	0.8±0.1	3.8±0.5
NCS ZC73014a	Tea	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			149±7	140±20	13±5	8±1	28±4	(0.2)	1.45±0.05	1.01±0.08	0.25±0.02
NCS ZC73015a	Milk Powder	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			5.1±1.9	(0.2)		(1.5)	(0.06)	2.6±0.9	1.16±0.05	4.6±1.4**	0.077±0.012
NCS ZC73029a	Rice	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
			4.5±1.1	(0.3)	(2)	3.5±0.8	(0.07)	(0.1)	0.083±0.008	(1.7)**	0.019±0.005
NCS ZC73036a	Green tea	F	Fe	Gd**	Ge**	Hg**	Ho**	I	K*	La	Li
		(155)	161±18	58±7	7.5±1.6	7.3±0.7	11±2	0.16±0.06	1.31±0.05	0.34±0.04	0.20±0.03

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		Lu**	Mg*	Mn	Mo	N*	Na	Nb	Nd	Ni
NCS ZC73008a	Rice	(0.04)	0.013±0.001	11.1±0.7	0.42±0.04	1.30±0.05	11.8±1.6	(1.3)**	1.0±0.3**	0.21±0.02
NCS ZC73009a	Wheat	(0.07)	0.062±0.004	10.0±0.4	0.31±0.02	2.1±0.1	37±5		0.005±0.001	(0.08)
NCS ZC73012a	Cabbage	0.11±0.04	0.22±0.01	21±1	0.58±0.05	2.4±0.2	0.75±0.07*	(0.01)	0.007±0.002	0.5±0.2
NCS ZC73013a	Spinage	5.4±1.2	0.99±0.07	80±4	0.65±0.08	3.9±0.3	1.8±0.07*		0.65±0.09	1.9±0.2
NCS ZC73014a	Tea	16±3	0.18±0.01	0.125±0.004*	0.04±0.01	3.4±0.3	22.6±6.7		0.66±0.08	
NCS ZC73015a	Milk Powder	(0.04)	0.094±0.005	0.36±0.11	0.32±0.02	(4)	0.32±0.02*		0.9±0.2**	
NCS ZC73029a	Rice		0.017±0.001	9.6±0.4	0.56±0.04	1.3±0.1	(14)		1.0±0.2**	0.27±0.03
NCS ZC73036a	Green tea	6±1	0.150±0.005	0.117±0.004*	0.053±0.012	3.7±0.3	15±4	(0.15)	0.25±0.04	4.4±0.3
		P*	Pb	Pr**	Rb	S*	Sb	Sc**	Se	Si
NCS ZC73008a	Rice	0.078±0.003	0.10±0.02	0.5±0.2	1.8±0.2	0.10±0.01	0.009±0.003	(6)	0.036±0.008	48±15
NCS ZC73009a	Wheat	0.18±0.01	0.09±0.03	1.2±0.3	3.2±0.3	0.15±0.01	(6)**	(11)	(0.03)	(75)
NCS ZC73012a	Cabbage	0.34±0.02	0.13±0.05	1.6±0.3	15.7±1.1	0.62±0.03	(0.01)	14.7±5.3	0.05±0.02	
NCS ZC73013a	Spinage	0.41±0.02	1.07±0.09	170±30	31±2	0.44±0.03	0.038±0.007	180±40	(0.09)	0.49±0.15*
NCS ZC73014a	Tea	0.24±0.01	1.09±0.13	160#(150-180)	45.9±3.3	0.26±0.02	0.05±0.01	89±17	0.09±0.04	0.04±0.01*
NCS ZC73015a	Milk Powder	0.77±0.06	(0.05)	(0.50)	10.6±0.6	0.25±0.01	(0.004)	(28)	0.24±0.03	
NCS ZC73029a	Rice	0.087±0.006	0.08±0.02	0.40±0.13	4.0±0.3	0.11±0.01	0.007±0.003	(60)	0.06±0.01	
NCS ZC73036a	Green tea	0.27±0.02	1.6±0.2	64±7	81±6	0.23±0.03	0.055±0.007	54±10	0.09±0.03	0.08±0.01*
		Sm**	Sn	Sr	Tb**	Th**	Ti	Tl**	Tm**	U**
NCS ZC73008a	Rice	0.3±0.1		0.15±0.03	0.07±0.03	(1)		0.23±0.05	(0.05)	(0.8)
NCS ZC73009a	Wheat	0.9±0.2		2.6±0.2	(0.2)	(1.5)		(0.3)	(0.07)	
NCS ZC73012a	Cabbage	1.4±0.4		57±2	0.3±0.1	2.8±0.8		4.8±1.1	0.08±0.02	100±20
NCS ZC73013a	Spinage	130±20	0.062±0.007	120±7	17±3	220±70	(37)	44±10	5.5±1.4	47±12
NCS ZC73014a	Tea	120±20	0.06±0.01	13.7±0.7	21±2	33.4±7.2	(11)	47±8	14±2	13±2
NCS ZC73015a	Milk Powder	(0.3)	(0.010)	6.2±0.8	(0.06)	(2)	(3.5)	(0.3)		1.6±0.6
NCS ZC73029a	Rice	0.32±0.12		0.17±0.04	0.07±0.02	(0.8)		(0.2)	(0.04)	(0.6)
NCS ZC73036a	Green tea	54±6	0.11±0.02	14.0±1.3	9±1	25±8	(11)	57±11	5.4±0.9	8.2±1.5
		V	Y	Yb**	Zn					
NCS ZC73008a	Rice	(0.02)	0.21±0.05	0.19±0.05	13.3±1.2					
NCS ZC73009a	Wheat	(0.04)	0.19±0.04	0.28±0.04	12.3±1.5					
NCS ZC73012a	Cabbage	(0.1)	0.28±0.05	0.48±0.13	12.3±1.1					
NCS ZC73013a	Spinage	(20)	0.7±0.1	36±5	42±4					
NCS ZC73014a	Tea	0.3±0.1	2.0±0.2	100±20	27±3					
NCS ZC73015a	Milk Powder	(0.04)	0.12±0.02	0.07±0.03	32±3					
NCS ZC73029a	Rice	(0.02)	0.17±0.03	0.13±0.03	12.4±1.2					
NCS ZC73036a	Green tea	0.26±0.03	0.51±0.05	36±5	26±3					

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Number	Name	Chemical Composition								Unit Size (in g)
		Ag(10^{-3})	Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-3})	Bi(10^{-3})		
NCS ZC 73019	Fresh Kindney beans	(5)	0.043	0.15	21	11.4	14	4.8		35
NCS ZC 73020	Garlic	(5)	0.021	0.31	7.5	4.1	4.4	13		35
NCS ZC 73022	Scallop	(8)	0.0156	3.6	12	0.62	3.2	3.8		12
		Br(10^{-6})	Ca(10^{-2})	Cd(10^{-6})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})
NCS ZC 73019	Fresh Kindney beans	0.62	0.67	(0.020)	0.35	0.14	0.29	0.66	0.036	8.7
NCS ZC 73020	Garlic	1.9	0.081	0.062	0.16	0.075	0.056	0.3	0.025	4.6
NCS ZC 73022	Scallop	32	0.075	1.06	0.053	0.81	0.047	0.28	0.014	1.34
		Dy(10^{-3})	Er(10^{-3})	Eu(10^{-3})	F(10^{-6})	Fe(10^{-6})	Gd(10^{-3})	Ge(10^{-3})	Hf(10^{-6})	Hg(10^{-3})
NCS ZC 73019	Fresh Kindney beans	23	12	7.2	(15)	330	28	14		3.8
NCS ZC 73020	Garlic	8.9	4.2	3.2	(35)	205	11.4	(12)	(0.04)	4
NCS ZC 73022	Scallop	5.3	3.3	0.9	(13)	41	5.2	(8)		40
		Ho(10^{-3})	I(10^{-6})	K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-3})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})
NCS ZC 73019	Fresh Kindney beans	4.5	(0.14)	2.26	0.17	0.31	1.77	0.336	29.5	4.9
NCS ZC 73020	Garlic	1.6	0.57	1.14	0.092	0.13	0.58	0.105	13.4	0.21
NCS ZC 73022	Scallop	1.2	1.83	1.15	0.037	0.13	0.49	0.174	19.2	0.066
		N(10^{-2})	Na(10^{-2})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-3})	Rb(10^{-6})	S(10^{-2})
NCS ZC 73019	Fresh Kindney beans	2.79	0.081	0.14	4.4	0.38	0.66	38	9.5	0.195
NCS ZC 73020	Garlic	3.22	0.095	0.066	0.92	0.466	0.72	17	6.5	1.01
NCS ZC 73022	Scallop	12.8	0.46	0.025	0.29	0.88	(0.12)	6	5.1	1.5
		Sb(10^{-6})	Sc(10^{-6})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-3})	Sn(10^{-6})	Sr(10^{-6})	Tb(10^{-3})	Th(10^{-6})
NCS ZC 73019	Fresh Kindney beans	0.028	0.067	0.043	(0.27)	29	(0.2)	55	4.1	0.055
NCS ZC 73020	Garlic	0.023	0.021	0.39	(0.08)	13	(0.07)	12.3	1.66	0.024
NCS ZC 73022	Scallop	(0.014)	(0.012)	1.5	(0.013)	4.8	(0.13)	6.5	0.84	(0.012)
		Ti(10^{-6})	Tl(10^{-6})	Tm(10^{-3})	U(10^{-3})	V(10^{-6})	Y(10^{-6})	Yb(10^{-3})	Zn(10^{-6})	Ash(%)
NCS ZC 73019	Fresh Kindney beans	21	4.2	1.8	90	0.51	0.155	11	32	(6.9)
NCS ZC 73020	Garlic	10	20	(0.65)	75	0.2	0.057	(4.2)	21.7	(3.4)
NCS ZC 73022	Scallop	(6)	2.5	0.52	7.3	0.36	0.107	3.2	75	(4.5)

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Number	Name	Chemical Composition								Unit Size (in g)
		Ag(10 ⁻³)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁶)	Ba(10 ⁻⁶)	Be(10 ⁻³)	Bi(10 ⁻³)		
NCS ZC 73023	Spirulina	42	0.033	0.22	(2.8)	11	21	81		12
NCS ZC 73024	Pollen	(5.8)	(0.045)	0.095	85	2.9	10	4.4		12
NCS ZC 73025	Ginseng	(4)	(0.036)	(0.03)	10.5	35	5.3	(2.4)		12
NCS ZC 73026	Huang-qi	(8)	0.18	0.57	16.8	20.5	50	14		35
		Br(10 ⁻⁶)	Ca(10 ⁻²)	Cd(10 ⁻⁶)	Ce(10 ⁻⁶)	Cl(10 ⁻²)	Co(10 ⁻⁶)	Cr(10 ⁻⁶)	Cs(10 ⁻⁶)	Cu(10 ⁻⁶)
NCS ZC 73023	Spirulina	4.8	0.158	0.37	7.2	0.49	0.41	1.5	0.034	7.7
NCS ZC 73024	pollen	1.1	0.308	0.037	0.35	0.033	0.1	0.51	0.061	8.2
NCS ZC 73025	Gineseng	(0.27)	0.406	0.033	0.06	0.023	0.072	0.13	0.017	5.9
NCS ZC 73026	Huang-qi	2.6	0.456	0.042	2.03	0.042	0.44	2.2	0.235	8.5
		Dy(10 ⁻³)	Er(10 ⁻³)	Eu(10 ⁻³)	F(10 ⁻⁶)	Fe(10 ⁻⁶)	Gd(10 ⁻³)	Ge(10 ⁻³)	Hf(10 ⁻⁶)	Hg(10 ⁻³)
NCS ZC 73023	Spirulina	186	78	87	(37)	0.11	355	(36)	(0.03)	(15)
NCS ZC 73024	pollen	20	10.8	6.2	(12)	212	27	(8)		3.2
NCS ZC 73025	Gineseng	3.2	1.7	(8)	(9)	55	5.5			4
NCS ZC 73026	Huang-qi	122	60	32	(20)	0.113	160	(26)		(12)
		Ho(10 ⁻³)	I(10 ⁻⁶)	K(10 ⁻²)	La(10 ⁻⁶)	Li(10 ⁻⁶)	Lu(10 ⁻³)	Mg(10 ⁻²)	Mn(10 ⁻⁶)	Mo(10 ⁻⁶)
NCS ZC 73023	Spirulina	33	0.54	1.41	4.8	0.24	9.5	0.287	31.7	0.3
NCS ZC 73024	pollen	3.8	(0.16)	0.585	0.17	0.21	1.22	0.163	22.7	0.42
NCS ZC 73025	Gineseng	0.67	(0.1)	0.96	0.045	0.087	(0.3)	0.137	21	0.18
NCS ZC 73026	Huang-qi	23	0.3	0.7	1.07	1.25	9	0.228	33	5.7
		N(10 ⁻²)	Na(10 ⁻²)	Nd(10 ⁻⁶)	Ni(10 ⁻⁶)	P(10 ⁻²)	Pb(10 ⁻⁶)	Pr(10 ⁻³)	Rb(10 ⁻⁶)	S(10 ⁻²)
NCS ZC 73023	Spirulina	10.6	1.9	2.4	1.44	1.17	2.8	705	1.5	0.78
NCS ZC 73024	pollen	4.3	(0.009)	0.14	0.5	0.65	0.25	38	6.4	0.38
NCS ZC 73025	Gineseng	1.9	0.0077	0.024	1.11	0.263	0.12	6.5	4.1	0.11
NCS ZC 73026	Huang-qi	2.35	0.145	0.9	2.26	0.225	1.44	231	10.5	0.193
		Sb(10 ⁻⁶)	Sc(10 ⁻⁶)	Se(10 ⁻⁶)	Si(10 ⁻²)	Sm(10 ⁻³)	Sn(10 ⁻⁶)	Sr(10 ⁻⁶)	Tb(10 ⁻³)	Th(10 ⁻⁶)
NCS ZC 73024	pollen	0.083	0.25	0.24	(0.23)	354	(0.2)	36	41	0.17
NCS ZC 73025	Gineseng	0.014	0.068	0.03	(0.15)	30		13.2	3.7	0.53
NCS ZC 73026	Huang-qi	(0.008)	(0.017)	0.012	(0.034)	4.5	(0.02)	33	0.65	(0.008)
		0.063	(0.30)	0.071	(0.71)	172	(0.10)	51	22	0.3
		Ti(10 ⁻⁶)	Tl(10 ⁻⁶)	Tm(10 ⁻³)	U(10 ⁻³)	V(10 ⁻⁶)	Y(10 ⁻⁶)	Yb(10 ⁻³)	Zn(10 ⁻⁶)	Ash(%)
NCS ZC 73023	Spirulina	34	51	10	31	0.7	0.9	62	42	(8.8)
NCS ZC 73024	pollen	20	11	1.4	12	0.46	0.12	9.8	31	(3.2)
NCS ZC 73025	Gineseng	5.8	8.2	(0.3)	3.5	0.073	0.16	1.8	11.1	(3.0)
NCS ZC 73026	Huang-qi	102	51	8.8	122	2.56	0.6	62	22.3	(5.16)
Number	Name	Chemical Composition(ug/g)								Unit Size (in g)
		K*	Na*	P*	Cl*	Ca	Mg	Cu	Zn	Mn
NCS ZC 71001	Beef Liver	1.05	0.22	1.30	0.29	189	668	91.6	192	8.92
										25
		Fe	Se	Mo	Sr	Co	S*	Ni	Al	Br
NCS ZC 71001	Beef Liver	346	0.56	3.76	0.53	0.254	(1.27)	(0.28)	(12)	(5.6)
		Ba	Cd	Hg	Rb	Pb	F	Ti		
NCS ZC 71001	Beef Liver	(3.4)	(0.388)	(0.18)	(26)	(0.54)	(17)	(0.63)		

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Number	Name	Chemical Composition									Unit Size (in g)
		Ag(10 ⁻⁹)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁹)	Ba(10 ⁻⁶)	Be(10 ⁻⁹)	Bi(10 ⁻⁹)			
NCS ZC 73031	Carrot	(0.006)	(0.046)	0.11±0.02	18.1±1.1	24±3	6.5±1.5	(2.5)			35
NCS ZC 73031	Carrot	Br(10 ⁻⁶)	Ca(10 ⁻²)	Cd(10 ⁻⁶)	Ce(10 ⁻⁶)	Cl(10 ⁻²)	Co(10 ⁻⁹)	Cr(10 ⁻⁶)	Cs(10 ⁻⁹)	Cu(10 ⁻⁶)	
		(2.4)	0.255±0.010	0.034±0.004	177±38	(0.23)	66±7	1.04±0.13	42±4	4.1±0.3	
NCS ZC 73031	Carrot	Dy(10 ⁻⁹)	Er(10 ⁻⁹)	Eu(10 ⁻⁹)	Fe(10 ⁻⁶)	Gd(10 ⁻⁹)	Ge(10 ⁻⁹)	Hg(10 ⁻⁹)	Ho(10 ⁻⁹)	I(10 ⁻⁶)	
		11.0±1.4	5.6±0.6	7.6±2.3	148±15	14.5±2.8	6.6±1.5	3.2±0.8	2.0±0.2	(0.08)	
NCS ZC 73031	Carrot	K(10 ⁻²)	La(10 ⁻⁹)	Li(10 ⁻⁶)	Lu(10 ⁻⁹)	Mg(10 ⁻²)	Mn(10 ⁻⁶)	Mo(10 ⁻⁶)	N(10 ⁻²)	Na(10 ⁻²)	
		1.08±0.04	114±24	0.16±0.02	(0.8)	0.091±0.003	12.1±0.5	0.10±0.01	(1.06)	0.65±0.03*	
NCS ZC 73031	Carrot	Nb(10 ⁻⁹)	Nd(10 ⁻⁹)	Ni(10 ⁻⁶)	P(10 ⁻²)	Pb(10 ⁻⁶)	Pr(10 ⁻⁹)	Rb(10 ⁻⁶)	S(10 ⁻²)	Sb(10 ⁻⁹)	
		24±4	79±9	0.67±0.10	0.23±0.02	0.43±0.07	21±3	6.9±0.5	(0.1)	(15)	
NCS ZC 73031	Carrot	Sc(10 ⁻⁹)	Se(10 ⁻⁶)	Si(10 ⁻²)	Sm(10 ⁻⁹)	Sn(10 ⁻⁹)	Sr(10 ⁻⁶)	Tb(10 ⁻⁹)	Th(10 ⁻⁹)	Ti(10 ⁻⁶)	
		(32)	0.031±0.010	(0.156)	14.3±2.3	(22)	22±2	2.1±0.5	28±6	(12)	
NCS ZC 73031	Carrot	Tl(10 ⁻⁹)	Tm(10 ⁻⁹)	U(10 ⁻⁹)	V(10 ⁻⁶)	Y(10 ⁻⁶)	Yb(10 ⁻⁹)	Zn(10 ⁻⁶)			
		10.7±2.1	0.83±0.14	9.8±1.7	(0.21)	0.09±0.02	5.5±0.8	11.2±0.5			
Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		α-666	β-666	γ-666	δ-666	PCB28	PCB52*	P,P'-DDE	P,P'-DDD	O,P'-DDT	
NCS ZC71002	Organochlorine	175	395	33.2	42.1	74	13.2	108	114	160	20
NCS ZC71003	Pesticides and	650	907	161	104	16.2	382	228	493		20
NCS ZC71004	Polychlorinated	229	561	51.8	49	11.8 x 10 ²		369	107	146	20
NCS ZC71005	Biphenyls	8.4	15.5	6.5	3.9*	400		342	36	24	20
NCS ZC71005	Congeners in soil										
NCS ZC71006	Organochlorine	23.1 x 10 ²	684	176	20.6			360	295	52	20
NCS ZC71007	Pesticides in soil										
NCS ZC71007	Polychlorinated					9.1 x 10 ²					20
NCS ZC71007	Biphenyls										
NCS ZC71007	Congeners in soil										
Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		P,P'-DDT	PCB52	PCB101	PCB118	PCB153	PCB138	PCB180	PCB138*		
NCS ZC71002	Organochlorine	609									
NCS ZC71003	Pesticides and	21.2 x 10 ²									
NCS ZC71004	Polychlorinated	511	291	109	126	16.5	18.6	7			
NCS ZC71005	Biphenyls	225	253	230	192	118	151	41.3			
NCS ZC71005	Congeners in soil										
NCS ZC71006	Organochlorine	232									
NCS ZC71007	Pesticides in soil										
NCS ZC71007	Polychlorinated		6.2 x 10 ²	5.6 x 10 ²	396	276		102	384		
NCS ZC71007	Biphenyls										
NCS ZC71007	Congeners in soil										

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Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
NCS ZC71008	Agricultural Soils	0.56±0.06	22.5±0.5	41±4	448±12	2.15±0.11	1.68±0.07	4.5±0.3	2.02±0.10	67±4	50
NCS ZC71009	Agricultural Soils	0.44±0.04	83.4±2.4	60±4	502±16	2.62±0.12	47.8±2.4	6.0±0.5	14.2±0.7	83±4	50
NCS ZC71010	Agricultural Soils	0.91±0.11	12.5±0.4	66±4	480±20	2.32±0.09	0.58±0.08	5.2±0.5	0.276±0.029	79±5	50
NCS ZC71011	Agricultural Soils	0.259±0.020	41.9±1.3	92±4	351±9	1.55±0.06	1.99±0.09	1.8±0.5	0.276±0.012	87±5	50
NCS ZC71012	Agricultural Soils	7.5±0.9	222±7	50±3	713±21	1.75±0.08	6.0±0.5	1.8±0.6	0.62±0.04	70.2±2.9	50
NCS ZC71013	Agricultural Soils	0.128±0.019	19.3±1.1	70±4	386±12	2.79±0.14	0.62±0.05	4.55±0.29	0.398±0.020	87±4	50
NCS ZC71008	Agricultural Soils	Cl	Co	Cr	Cu	Dy	Er	Eu	F	Ga	Gd
		94±6	13.4±0.6	70±5	76±5	4.13±0.23	2.36±0.10	1.14±0.03	532±26	13.2±0.6	4.55±0.23
		69±6	14.4±0.5	92±4	69.8±2.1	5.63±0.18	3.15±0.05	1.48±0.06	566±10	19.5±0.6	6.15±0.26
		119±7	13.7±0.5	78.2±2.9	104±5	5.53±0.14	3.10±0.12	1.44±0.04	520±21	16.7±0.6	6.03±0.28
		45±4	13.4±0.5	59.0±2.6	69±3	5.04±0.21	2.99±0.11	1.16±0.04	353±17	12.6±0.8	5.27±0.28
		52±5	9.17±0.29	27.5±0.9	301±11	3.23±0.16	1.79±0.07	1.44±0.05	762±45	21.5±1.0	4.20±0.27
		34±5	23.9±1.0	87.0±1.5	53.1±1.3	5.41±0.25	3.16±0.15	1.40±0.06	0.128*±0.009*	21.8±1.0	5.8±0.4
NCS ZC71008	Agricultural Soils	Ge	Hg	Ho	I	La	Li	Lu	Mn	Mo	N (%)
		1.33±0.10	0.205±0.013	0.83±0.07	2.77±0.13	36.7±1.1	38.4±2.1	0.361±0.023	648±13	4.28±0.19	0.281±0.010
		1.61±0.14	0.62±0.04	1.12±0.07	2.19±0.10	45.5±2.3	46.7±1.8	0.459±0.021	438±12	1.1±0.4	0.276±0.009
		1.48±0.07	3.44±0.25	1.09±0.07	1.58±0.11	42.7±2.4	41.1±1.9	0.456±0.026	517±14	0.63±0.06	0.218±0.008
		1.35±0.12	0.074±0.006	1.02±0.04	1.11±0.10	42.3±2.2	29.9±1.0	0.45±0.03	424±13	1.40±0.09	0.120±0.004
		1.35±0.07	0.087±0.010	0.63±0.04	1.37±0.15	40.3±1.5	18.7±1.0	0.272±0.015	725±23	26.4±1.7	613**±19**
		1.72±0.07	0.133±0.014	1.12±0.07	3.54±0.28	43.0±2.6	49.0±2.4	0.49±0.04	0.117*±0.004*	1.42±0.09	0.154±0.005
NCS ZC71008	Agricultural Soils	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc
		11.5±0.3	28.7±1.2	28.7±1.3	887±23	92±5	7.7±0.4	78±5	0.111*±0.004*	3.4±0.4	10.0±0.5
		17.0±0.9	37.8±1.5	40.9±1.6	660±22	372±19	10.0±0.4	114±4	502±12	22.1±1.9	15.4±1.2
		16.4±0.8	36.9±1.5	34.7±1.2	833±13	153±6	9.9±0.3	101±4	447±16	2.03±0.25	12.6±0.5
		19.5±1.4	34.2±1.6	19.2±0.7	420±14	42.4±2.1	9.3±0.5	72±4	364±28	1.62±0.08	9.3±0.6
		14.8±0.6	29.1±1.5	9.9±0.4	0.106*±0.004*	340±11	8.0±0.4	109±5	0.301*±0.021*	27.3±2.2	7.3±0.3
		18.1±1.0	37.1±1.8	43.9±1.2	863±25	40.9±2.0	9.9±0.5	129±8	222±21	2.08±0.22	16.2±0.7
NCS ZC71008	Agricultural Soils	Se	Sm	Sn	Sr	Tb	Th	Tl	Tm	U	V
		1.96±0.18	5.40±0.20	7.6±0.5	236±4	0.74±0.05	11.0±0.7	1.26±0.05	0.363±0.023	3.19±0.22	86.6±2.9
		1.86±0.18	7.03±0.25	27.9±2.3	99.3±2.2	0.99±0.07	15.0±0.7	1.28±0.06	0.479±0.022	2.93±0.09	112±4
		0.44±0.04	6.95±0.20	54±5	103±3	0.97±0.07	13.5±0.6	0.65±0.04	0.47±0.03	2.64±0.14	95.1±2.6
		0.412±0.028	6.20±0.29	5.1±0.5	72.1±1.8	0.85±0.04	13.5±0.7	0.536±0.023	0.461±0.025	2.86±0.12	81.4±2.9
		2.82±0.21	5.08±0.26	10.0±0.6	260±5	0.606±0.024	9.9±0.4	0.977±0.023	0.274±0.018	3.19±0.12	91±5
		0.52±0.07	6.7±0.4	11.0±1.3	120±3	0.93±0.04	14.6±0.7	0.94±0.04	0.49±0.04	3.73±0.13	132±4
NCS ZC71008	Agricultural Soils	W	Y	Yb	Zn	Zr	F(water soluble)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	MgO (%)
		4.6±0.5	23.7±1.4	2.30±0.07	201±6	169±5	8.3±1.2	43.85±0.27	10.31±0.11	4.83±0.07	1.24±0.04
		2.56±0.10	30.0±1.2	3.01±0.08	221±7	232±7	8.7±1.1	62.54±0.22	15.41±0.09	5.24±0.11	0.932±0.023
		2.31±0.12	29.1±1.4	2.95±0.15	230±7	270±7	6.8±0.8	66.9±0.4	13.17±0.12	4.97±0.14	0.973±0.020
		3.13±0.19	28.1±1.1	2.92±0.12	89.7±2.5	377±17	1.89±0.28	77.1±0.4	9.45±0.10	3.89±0.08	0.512±0.011
		4.63±0.25	16.7±1.0	1.76±0.10	260±7	222±11	1.53±0.23	61.5±0.5	15.30±0.14	9.06±0.20	0.783±0.019
		2.28±0.13	28.8±1.6	3.13±0.18	117±4	212±12	4.3±0.6	61.5±0.6	16.27±0.14	7.23±0.12	1.223±0.015
NCS ZC71008	Agricultural Soils	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	Corg (%)	Ti (%)				
		15.0±0.5	0.709±0.013	1.628±0.019	7.90±0.28	4.73±0.24	0.315±0.007				
		1.000±0.025	1.00±0.04	1.78±0.04	2.81±0.13	2.75±0.15	0.493±0.020				
		1.085±0.018	1.19±0.04	1.732±0.018	2.45±0.11	2.36±0.10	0.476±0.020				
		0.412±0.010	0.475±0.012	1.45±0.04	1.11±0.06	1.07±0.06	0.571±0.029				
		1.420±0.028	1.11±0.04	3.11±0.06	0.62±0.04	0.59±0.04	0.410±0.020				
		1.28±0.03	0.35±0.04	2.62±0.06	1.29±0.07	1.12±0.04	0.546±0.017				

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Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
NCS ZC71014	Agricultural Soils	0.088±0.011	8.8±0.4	38.2±2.2	592±21	1.75±0.11	0.259±0.014	5.2±0.4	0.238±0.015	56.5±2.7	50
NCS ZC71015	Agricultural Soils	5.4±0.5	398±19	64.1±2.3	713±19	1.90±0.12	10.9±0.7	4.5±0.4	2.14±0.08	70±4	50
NCS ZC71016	Agricultural Soils	0.46±0.05	13.8±0.9	29.8±2.3	863±16	1.99±0.09	0.559±0.028	5.1±0.5	2.71±0.19	73.8±2.8	50
NCS ZC71017	Agricultural Soils	0.162±0.014	6.2±0.3	26.2±2.2	515±20	3.70±0.17	0.77±0.05	3.93±0.17	0.293±0.016	135±8	50
NCS ZC71018	Agricultural Soils	1.61±0.18	349±24	65±5	511±23	2.12±0.13	3.29±0.21	2.83±0.19	2.58±0.12	83±7	50
NCS ZC71019	Agricultural Soils	2.21±0.24	8.9±0.5	11.5±1.0	521±29	2.25±0.14	9.6±0.6	2.1±0.3	0.636±0.027	61±5	50
NCS ZC71014	Agricultural Soils	Cl	Co	Cr	Cu	Dy	Er	Eu	F	Ga	Gd
		91±7	10.1±0.4	60.6±2.1	21.7±0.9	3.79±0.15	2.19±0.09	1.12±0.05	450±29	14.2±0.9	4.20±0.21
		74±6	15.0±0.9	65.3±2.5	76±4	4.59±0.15	2.64±0.10	1.36±0.06	504±25	15.5±1.1	5.04±0.20
		98±7	12.5±0.5	60.0±2.3	244±21	3.87±0.14	2.11±0.05	1.41±0.06	757±59	16.0±0.9	4.77±0.26
		74±7	11.7±0.5	39.9±2.6	56.3±2.8	6.7±0.5	3.68±0.23	1.69±0.10	547±19	24.2±1.1	7.8±0.6
		54±5	16.1±0.6	215±12	244±11	4.39±0.26	2.55±0.15	1.21±0.08	441±22	15.8±0.7	4.8±0.4
		52±3	8.74±0.28	43.5±2.0	74±4	3.43±0.22	2.04±0.13	0.87±0.06	440±21	14.7±0.7	3.65±0.25
NCS ZC71014	Agricultural Soils	Ge	Hg	Ho	I	La	Li	Lu	Mn	Mo	N (%)
		1.22±0.12	0.052±0.005	0.76±0.04	2.72±0.17	30.5±1.8	23.9±1.3	0.339±0.017	503±17	0.54±0.04	0.107±0.005
		1.40±0.10	0.101±0.009	0.92±0.04	2.38±0.10	36.5±1.9	33.3±1.7	0.406±0.017	0.104*±0.004*	1.30±0.12	0.126±0.006
		1.27±0.09	0.061±0.007	0.76±0.04	2.73±0.18	39.5±1.8	23.7±1.1	0.314±0.017	864±20	2.53±0.08	0.243±0.008
		1.40±0.07	0.157±0.014	1.26±0.12	1.79±0.12	69.8±2.9	25.1±1.3	0.57±0.04	498±18	2.49±0.12	0.170±0.006
		1.69±0.08	0.231±0.022	0.90±0.06	1.96±0.10	46±4	43.3±1.7	0.396±0.023	417±19	2.67±0.10	0.149±0.006
		2.09±0.10	0.085±0.010	0.70±0.05	2.86±0.12	32.7±1.9	21.6±1.3	0.340±0.023	0.297*±0.010*	7.3±0.3	693**±22**
NCS ZC71014	Agricultural Soils	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc
		10.9±0.6	26.1±1.3	23.9±0.9	0.105*±0.004*	23.2±1.2	7.0±0.3	85.6±1.7	238±37	0.69±0.04	9.4±0.5
		16.5±0.6	32.0±1.1	29.9±1.0	0.110*±0.004*	0.105*±0.004*	8.46±0.23	98.1±2.3	470±31	6.3±0.4	10.8±0.7
		13.1±0.9	33.3±1.3	22.8±1.4	0.339*±0.008*	50.9±1.2	8.9±0.4	85.1±1.4	644±65	0.84±0.04	9.7±0.6
		24.2±1.0	53±4	17.2±0.9	0.125*±0.007*	60±4	14.9±1.7	154±11	308±23	0.72±0.06	12.2±0.6
		18.9±0.9	33.3±2.2	90.6±2.6	607±14	166±11	9.3±1.2	99±5	281±16	7.8±0.7	11.5±0.5
		19.4±1.1	24.5±1.7	10.9±0.8	430±17	467±21	6.9±0.9	127±5	468±49	0.59±0.07	7.2±0.4
NCS ZC71014	Agricultural Soils	Se	Sm	Sn	Sr	Tb	Th	Tl	Tm	U	V
		0.259±0.016	4.92±0.19	2.63±0.19	262±7	0.667±0.025	8.1±0.5	0.558±0.013	0.337±0.011	1.46±0.08	66.4±1.4
		0.62±0.08	5.92±0.19	2.95±0.15	163±11	0.81±0.05	9.9±0.7	0.598±0.016	0.408±0.016	2.07±0.10	88±4
		0.495±0.029	5.78±0.19	2.3±0.4	304±9	0.710±0.023	7.52±0.27	0.699±0.018	0.321±0.018	1.93±0.13	76.1±2.0
		0.45±0.04	9.4±0.5	9.1±0.6	80±4	1.22±0.09	36.7±1.5	1.25±0.06	0.54±0.05	10.1±0.5	100±5
		1.19±0.08	5.88±0.28	5.6±0.4	79±5	0.76±0.05	15.7±0.7	0.83±0.05	0.394±0.027	4.27±0.18	96±5
		2.02±0.21	4.5±0.4	20.3±1.5	74±4	0.60±0.08	13.9±0.7	1.06±0.05	0.326±0.022	3.14±0.17	55±3
NCS ZC71014	Agricultural Soils	W	Y	Yb	Zn	Zr	F (watersoluble)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	MgO (%)
		1.39±0.12	20.4±1.1	2.17±0.09	64.4±2.0	246±10	7.2±1.0	67.41±0.26	11.77±0.10	3.68±0.07	1.85±0.08
		3.25±0.14	23.9±1.3	2.61±0.08	269±8	296±13	8.7±1.0	67.4±0.4	11.94±0.11	6.37±0.15	1.53±0.07
		2.57±0.12	20.1±0.8	2.05±0.07	302±9	247±14	3.3±0.7	59.7±0.4	12.57±0.26	4.78±0.12	3.76±0.13
		3.92±0.22	34.5±2.1	3.6±0.6	133±8	304±18	5.1±0.7	61.8±0.4	18.52±0.15	4.74±0.11	0.609±0.027
		6.7±0.5	22.4±1.9	2.5±0.5	261±12	276±15	2.2±0.5	69.52±0.26	12.34±0.14	5.98±0.14	1.34±0.04
		8.7±0.8	17.8±1.3	2.2±0.4	224±12	287±20	3.9±0.5	72.28±0.24	10.52±0.13	6.54±0.20	0.697±0.022
NCS ZC71014	Agricultural Soils	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	Corg (%)	Ti (%)				
		3.65±0.10	2.17±0.07	2.39±0.10	1.56±0.11	1.04±0.04	0.330±0.012				
		1.22±0.06	1.52±0.07	3.17±0.07	1.23±0.06	1.18±0.05	0.495±0.015				
		3.73±0.10	2.21±0.09	2.74±0.09	2.66±0.10	2.23±0.10	0.397±0.018				
		0.376±0.019	0.605±0.028	2.65±0.06	1.61±0.05	0.91±0.04	0.536±0.022				
		0.414±0.023	0.470±0.017	1.79±0.06	1.44±0.05	0.79±0.04	0.492±0.026				
		1.51±0.05	0.428±0.014	2.46±0.07	0.84±0.04	0.468±0.024	0.306±0.013				

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Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
NCS ZC71020	Agricultural Soils	0.093±0.008	14.9±0.8	63±7	184±7	3.40±0.18	0.483±0.025	4.6±0.3	0.57±0.03	116±8	50
NCS ZC71021	Agricultural Soils	0.155±0.024	83±6	106±8	531±20	2.57±0.17	0.611±0.028	4.2±0.4	1.47±0.06	98±5	50
NCS ZC71022	Agricultural Soils	0.16±0.02	55.7±2.4	77±6	471±20	3.83±0.25	0.85±0.04	4.0±0.5	12.1±0.4	107±6	50
NCS ZC71023	Agricultural Soils	0.094±0.005	4.45±0.28	23.3±1.1	733±18	1.78±0.06	0.173±0.007	2.86±0.13	0.130±0.007	59.3±2.9	50
NCS ZC71024	Agricultural Soils	1.07±0.07	30.0±0.6	44.6±1.8	783±22	2.11±0.12	2.38±0.08	9.0±0.4	26.2±0.9	77.8±2.4	50
NCS ZC71025	Agricultural Soils	0.399±0.022	9.88±0.28	34.9±2.0	765±17	2.09±0.08	1.06±0.04	5.5±0.4	1.99±0.07	71.7±2.1	50
NCS ZC71020	Agricultural Soils	Cl	Co	Cr	Cu	Dy	Er	Eu	F	Ga	Gd
		51±7	32.8±1.2	152±6	98±5	8.8±0.7	4.6±0.4	2.80±0.20	878±62	23.1±1.1	9.7±0.7
		52±7	19.9±0.9	86.1±2.7	32.6±2.0	5.4±0.5	3.22±0.25	1.25±0.10	960±76	19.3±0.7	5.4±0.4
		42±8	23.9±1.0	106±4	52.2±2.6	7.6±0.6	4.23±0.27	1.87±0.13	883±56	25.8±1.0	8.0±0.6
		104±6	13.8±0.6	82.8±2.2	25.2±1.6	3.48±0.14	1.97±0.10	1.24±0.05	485±25	16.9±0.7	4.11±0.22
		410±32	13.4±0.4	61±4	63.1±1.9	4.42±0.12	2.57±0.08	1.32±0.06	503±16	16.6±0.7	5.11±0.22
		140±12	16.3±0.4	95.2±2.3	54.2±2.0	4.33±0.14	2.44±0.06	1.40±0.04	521±18	18.0±0.8	5.01±0.10
NCS ZC71020	Agricultural Soils	Ge	Hg	Ho	I	La	Li	Lu	Mn	Mo	N (%)
		1.59±0.12	0.249±0.019	1.72±0.16	1.85±0.12	60±4	56±4	0.61±0.06	560±23	3.62±0.28	0.268±0.009
		1.62±0.08	12.2±1.0	1.13±0.09	1.96±0.11	45±4	52.1±2.7	0.51±0.05	0.120±0.005*	2.37±0.19	0.211±0.004
		1.89±0.13	0.395±0.020	1.53±0.12	4.85±0.18	55.6±2.5	67±4	0.64±0.06	0.675±0.021*	2.87±0.27	0.158±0.005
		1.21±0.14	0.029±0.004	0.692±0.028	1.63±0.10	31.1±1.4	21.8±1.3	0.305±0.014	594±16	0.69±0.04	623**±29**
		1.54±0.06	4.64±0.27	0.88±0.04	2.54±0.11	41.5±1.3	35.1±1.7	0.404±0.017	820±21	14.1±0.7	0.129±0.004
		1.27±0.06	0.309±0.018	0.86±0.04	2.59±0.13	38.2±1.9	31.9±1.0	0.364±0.022	848±16	1.35±0.07	0.170±0.007
NCS ZC71020	Agricultural Soils	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb	Sc
		52±8	57±4	77.7±2.1	0.141*±0.005*	26.3±2.0	14.3±1.0	55±4	0.117*±0.011*	1.36±0.12	22.2±0.7
		19.7±1.2	34.8±2.7	38.1±1.6	0.106*±0.005*	248±8	9.5±0.7	131±8	437±24	6.3±0.5	13.4±0.7
		21.3±1.6	48±4	56.1±2.6	704±15	215±7	12.8±0.9	147±7	327±16	2.29±0.15	17.8±1.2
		11.8±0.4	27.8±1.1	29.9±0.9	811±20	19.7±0.8	7.33±0.20	87.1±2.1	160±25	0.41±0.04	10.8±0.4
		14.3±0.5	34.3±1.1	26.8±0.8	613±18	182±5	9.66±0.26	99±4	677±25	2.87±0.14	9.8±0.5
		13.8±0.7	33.4±1.2	38.3±1.4	0.152*±0.005*	53.9±1.6	8.85±0.27	97.7±2.6	379±28	1.95±0.06	11.9±0.5
NCS ZC71020	Agricultural Soils	Se	Sm	Sn	Sr	Tb	Th	Tl	Tm	U	V
		1.42±0.11	11.1±0.8	3.60±0.20	96±4	1.58±0.11	11.5±0.5	0.43±0.04	0.68±0.07	6.1±0.3	289±14
		0.659±0.029	6.4±0.5	3.94±0.24	80.3±2.8	0.92±0.08	18.5±0.9	1.42±0.08	0.51±0.04	4.74±0.20	112±6
		0.598±0.026	9.3±0.7	4.62±0.26	42.2±1.7	1.31±0.09	19.7±0.9	1.15±0.09	0.66±0.06	5.91±0.28	175±7
		0.143±0.020	5.06±0.13	2.22±0.10	343±8	0.632±0.026	8.0±0.5	0.528±0.020	0.306±0.015	1.49±0.06	81.4±2.3
		0.75±0.04	6.06±0.15	4.53±0.28	196±4	0.79±0.04	11.4±0.5	0.865±0.019	0.395±0.016	2.26±0.06	79±4
		0.451±0.022	6.03±0.15	5.22±0.16	267±6	0.781±0.019	9.8±0.5	0.625±0.019	0.367±0.017	2.06±0.11	91±4
NCS ZC71020	Agricultural Soils	W	Y	Yb	Zn	Zr	F(water soluble)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	MgO (%)
		1.51±0.12	45.2±2.9	4.2±0.4	185±4	369±20	2.29±0.25	53.61±0.4	14.34±0.23	12.09±0.23	0.906±0.016
		2.37±0.17	29.3±1.8	3.26±0.26	201±6	278±12	2.3±0.4	63.8±0.4	14.26±0.25	6.59±0.16	1.12±0.04
		2.87±0.17	40.8±2.5	4.2±0.4	941±34	277±16	1.91±0.29	55.9±0.4	17.68±0.28	9.77±0.10	1.09±0.04
		1.02±0.07	18.0±0.5	1.93±0.06	62.7±1.9	278±10	6.1±0.9	66.9±0.4	14.08±0.18	4.81±0.08	1.54±0.03
		3.28±0.20	23.3±0.6	2.54±0.11	0.100*±0.003*	335±6	10.9±1.6	66.9±0.5	13.26±0.04	4.42±0.08	1.29±0.04
		2.06±0.12	22.7±0.7	2.36±0.09	159±5	219±3	6.2±0.5	63.1±0.4	14.15±0.08	5.37±0.10	1.76±0.04
NCS ZC71020	Agricultural Soils	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	Corg (%)	Ti (%)				
		0.541±0.016	0.187±0.010	1.61±0.06	3.85±0.13	2.10±0.08	1.78±0.05				
		0.377±0.017	0.168±0.012	3.25±0.09	2.02±0.11	1.12±0.04	0.570±0.011				
		0.483±0.021	0.146±0.016	2.25±0.06	1.37±0.06	0.710±0.022	0.618±0.015				
		2.15±0.04	3.216±0.010	2.57±0.04	0.66±0.04	0.368±0.017	0.372±0.010				
		1.67±0.05	1.99±0.05	2.66±0.07	1.60±0.07	0.84±0.04	0.431±0.008				
		1.98±0.04	2.47±0.08	2.45±0.07	1.81±0.05	0.995±0.027	0.435±0.007				

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Number	Name	Chemical Composition									Unit Size (in g)
		Ag(10 ⁻⁶)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁶)	Ba(10 ⁻⁶)	Be(10 ⁻⁹)	Bi(10 ⁻⁹)			
NCS ZC 73033	Scallion	(0.014)	(0.3)	0.52±0.11	25±2	36±5	59±11	(13)			35
NCS ZC 73034	Prawn	(0.017)	(0.029)	(2.5)	2.0±0.3	2.3±0.3	4.9±0.8	(5.4)			12
NCS ZC 73035	Pork liver		(0.012)	1.4±0.3	(0.6)	(0.24)	0.9±0.3	(0.9)			25
NCS ZC 73033	Scallion	Br(10 ⁻⁶)	Ca(10 ⁻³)	Cd(10 ⁻⁶)	Ce(10 ⁻⁶)	Cl(10 ⁻²)	Co(10 ⁻⁶)	Cr(10 ⁻⁶)	Cs(10 ⁻⁶)	Cu(10 ⁻⁶)	
		20±2	2.28±0.09	0.19±0.02	2.1±0.3	(0.85)	0.59±0.04	2.6±0.4	0.19±0.02	5.5±0.3	
		8.5±1.1	0.30±0.01	0.039±0.002	0.13±0.03	(0.189)	0.044±0.005	0.35±0.11	0.027±0.002	10.3±0.7	
		(2.8)	(0.023)	1.00±0.07	(0.005)	(0.17)	0.057±0.004	0.23±0.06	0.070±0.007	52±3	
NCS ZC 73033	Scallion	Dy(10 ⁻⁹)	Er(10 ⁻⁹)	Eu(10 ⁻⁹)	Fe(10 ⁻⁶)	Gd(10 ⁻⁹)	Ge(10 ⁻⁹)	Hg(10 ⁻⁹)	Ho(10 ⁻⁹)	I(10 ⁻⁶)	
		119±12	57±12	39±4	1010±55	155±34	(32)	12.0±2.3	22±4	(0.44)	
		7.9±0.5	4.4±0.4	2.5±0.3	112±12	10.5±1.2	6.0±1.4	49±8	1.5±0.2	(0.43)	
		(0.3)	(0.2)	(0.2)	519±34	(0.6)	(12)	45±8	(0.14)	(0.18)	
NCS ZC 73033	Scallion	K(10 ⁻²)	La(10 ⁻⁶)	Li(10 ⁻⁶)	Lu(10 ⁻⁹)	Mg(10 ⁻²)	Mn(10 ⁻⁶)	Mo(10 ⁻⁶)	N(10 ⁻²)	Na(10 ⁻²)	
		2.1±0.1	1.16±0.10	1.6±0.2	(8)	0.27±0.01	173±7	0.12±0.03	(2.9)	(0.03)	
		0.49±0.01	0.066±0.005	0.15±0.01	0.64±0.21	0.169±0.006	8.9±0.3	0.037±0.012	(13.5)	0.31±0.02	
		0.66±0.03	(0.004)	(0.02)		0.063±0.004	10.1±0.4	4.2±0.2	(11.2)	0.163±0.010	
NCS ZC 73033	Scallion	Nb(10 ⁻⁹)	Nd(10 ⁻⁶)	Ni(10 ⁻⁶)	P(10 ⁻²)	Pb(10 ⁻⁶)	Pr(10 ⁻⁹)	Rb(10 ⁻⁶)	S(10 ⁻²)	Sb(10 ⁻⁹)	
		(215)	0.91±0.11	(1.9)	0.36±0.02	1.34±0.16	235±29	9.4±0.8	0.46±0.04	(45)	
		16.5±4.0	0.056±0.006	(0.23)	0.77±0.03	0.20±0.05	14.5±1.1	1.4±0.1	(1)	(16)	
			(0.003)	(0.1)	1.14±0.06	0.12±0.03	(0.6)	27±2	0.80±0.12	(12)	
NCS ZC 73033	Scallion	Sc(10 ⁻⁶)	Se(10 ⁻⁶)	Si(10 ⁻²)	Sm(10 ⁻⁹)	Sn(10 ⁻⁶)	Sr(10 ⁻⁶)	Tb(10 ⁻⁹)	Th(10 ⁻⁶)	Ti(10 ⁻⁶)	
		(0.26)	0.069±0.009	(1.1)	167±18	(0.07)	74±5	22±5	364±58	(62)	
		(0.02)	(5.1)	(0.048)	10.7±1.8	(0.024)	20±2	1.5±0.2	28±8	(17)	
		(0.012)	1.54±0.29		(0.5)		0.51±0.04	(0.25)	(4.5)		
NCS ZC 73033	Scallion	Tl(10 ⁻⁹)	Tm(10 ⁻⁹)	U(10 ⁻⁹)	V(10 ⁻⁶)	Y(10 ⁻⁶)	Yb(10 ⁻⁹)	Zn(10 ⁻⁶)			
		37±8	7.8±1.5	(50)	(3)	0.61±0.14	57±17	25±1			
		2.0±0.5	0.69±0.18	9.7±0.8	0.24±0.07	0.09±0.02	4.1±0.8	76±4			
		1.2±0.2		3.2±0.9	(0.078)	(0.04)	(0.17)	211±11			
Number	Name	Composition (mg/kg)									Unit Size (in g)
		Cr	As	Cd	Hg	Pb	Cu	Ni	Se	K	
NCS ZC11016	Wheat	0.07	0.04	0.63	0.003#	0.24	5.5	0.48	0.04	0.34	35
NCS ZC11017	Wheat	0.22	0.05	0.09	0.003#	0.13	4.4	(0.15)	0.2	0.41	35
NCS ZC11018	Wheat	(0.06)	0.03	0.36	(0.003)	0.16	4.8	0.25	0.06	0.43	35
NCS ZC11019	Wheat	(0.03)	0.04	0.1	(0.002)	0.07	4.5	(0.17)	0.07	0.47	35
NCS ZC11020	Corn	(0.05)		0.28	0.004#	0.19	2.4	0.65	0.04	0.38	35
NCS ZC11021	Corn	0.07	0.04	0.11	0.003#	0.18	1.8	(0.18)	0.04	0.45	35
NCS ZC11016	Wheat	Na	Ca	Mg	Fe	Zn	Mn	Al			
		0.0033	0.044	0.13	0.0049	0.0073	0.004				
		0.0028	0.046	0.14	0.0061	0.0037	0.0034				
		0.0022	0.036	0.11	0.0052	0.0043	0.0025	0.023			
		0.0019	0.042	0.14	0.0037	0.003	0.0029	0.013			
		0.0007	0.0057	0.11	0.0025	0.0043	0.0003				
		0.0007	0.0088	0.11	0.0024	0.0021	0.0005				

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Number		Name	Chemical Composition(μg/g)						Unit Size (in g)							
			Cr	TAs	Cd	Hg	Pb	As inorganic								
NCS ZC 11001	Rice		0.064	0.23	0.24	0.005	0.12	0.18	35							
NCS ZC 11002	Rice		0.056	0.25	0.41	0.0041	0.15	0.19	35							
NCS ZC 11003	Rice		0.046	0.16	0.32	0.0043	0.071	(0.13)	35							
NCS ZC 11004	Rice		0.043	0.15	0.42	0.0036	0.11	0.12	35							
NCS ZC 11005	Rice		0.040	0.19	0.87	0.0033	0.056	0.15	35							
NCS ZC 11006	Rice		0.050	0.18	0.48	0.004	0.042	0.14	35							
NCS ZC 11007	Rice		0.06	0.11	1.28	0.0037	0.10	(0.084)	35							
NCS ZC 11008	Rice		0.045	0.11	0.99	0.0037	0.071	0.08	35							
NCS ZC 11009	Rice		0.05	0.106	1.72	0.004	0.25	0.078	35							
NCS ZC 11010	Rice		0.063	0.105	2.16	0.0038	0.11	0.081	35							
NCS ZC 11011	Rice		0.053	0.16	0.62	0.0038	0.064	0.13	35							
NCS ZC 11012	Rice		0.034	0.15	0.030	0.0040	0.062	0.13	35							
NCS ZC 11013	Rice		0.052	0.12	0.22	0.003	0.049	(0.082)	35							
NCS ZC 11014	Rice		0.050	0.12	0.11	0.0027	0.037	0.089	35							
NCS ZC 11015	Rice		0.05	0.061	0.007	(0.0017)	0.11	0.046	35							
Number		Name	Pb	Cd	Cr	Chemical Composition(μg/g)				Unit Size (in g)						
NCS ZC 76024	Pb, Cd, Cr in wheat powder		1.63	0.074	0.095					30						
NCS ZC 76025	Pb, Cd, Cr in wheat powder		0.810	0.015	0.105					30						
Number		Name	Pb	As	Chemical Composition(μg/g)				Unit Size (in g)							
NCS ZC 83005	Pb, As in Cosmetic		37.2	9.0					10							
Number		Name	Chemical Composition(mg/mL)						Unit Size (in mL)							
NCS ZC 76011	Amaranth		0.50						5							
NCS ZC 76012	Ponceau 4R		0.50						5							
NCS ZC 76013	Tartra Zine		0.50						5							
NCS ZC 76014	Brilliant Blue		0.50						5							
NCS ZC 76015	Sunset Yellow		0.50						5							
Number		Name	Zn	Se	Cr	Mg	Mn	As	Ca	Fe	Cu	Sr	Hg	Na	Unit Size (in g)	
NCS ZC 81002b	Human Hair		191	0.59	8.74	248	3.83	0.198	1537	160	33.6	8.17	1.06	445	7	
NCS ZC 81002b	Human Hair		Pb	Ni	Cd	Al	Co	Mo	Sc*	Br	Sb	K	Ag	Ba		
		3.83	5.77	0.072	23.2	0.153	1.06		(0.59)	0.12	(14.4)	0.037	11.1			
		P	I	V	Cl	La	S***	Ti								
NCS ZC 81002b	Human Hair		174	0.96	(0.089)	(48.2)	(0.029)	(4.62)	(2.10)							
* Unit of Certifia Value of the element is μg/kg																
** Unit of Certified Value of the elencent is weight percent																
Number		Name	Range Concentration(mg/L)						Unit Size (in mL)							
NCS ZC 85301	COD		70~200						20							
NCS ZC 85302	COD		50~150						20							
NCS ZC 85303	Phenol		0.01~1.5						20							
Number		Name	Pb	Cd	Ni	Cr*	Co	Cu	Sb	As	Hg	Chemical Composition(Percent)				Unit Size (in g)
NCS ZC 93018	Metals in leather		94	86.6	95.5	56.3	91.4	97.1	89.6	90.7	93.5					2

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Number	Name	Composition (mg/kg)								Unit Size (in g)
		Cr	As	Cd	Hg	Pb	Cu	Ni	Se	
NCS ZC11022	Carrot	0.41	0.019	0.052	(0.0036)	0.046	3.1	0.52	0.026	35
NCS ZC11023	Celery	1.4	0.35	0.11	0.022				(0.12)	35
NCS ZC11024	Spinach	1.8	0.14	0.35	0.012	0.19	7.9	0.66	(0.11)	35
NCS ZC11025	Cabbage		0.019	0.029		0.022	3.9	1.04	0.12	35
NCS ZC11026	Agaric			0.11	0.015	3.4	4.1		0.25	35
NCS ZC11027	Salmon		0.63	0.027	0.036	(0.034)	4.9		0.41	35
NCS ZC11028	Chicken		0.007				1.7			35
NCS ZC11029	Beef		0.038				2.7			35
NCS ZC11030	Pork				0.0019		2.3	0.14		35
NCS ZC11031	Onion	1.2	0.11	0.016	0.0013	0.14	5.6	1.1		35
NCS ZC11032	Purple sweet potato		(0.03)		0.0012	0.054	4.2	0.62		35
NCS ZC11033	Mushroom	1.14	(0.28)	0.53	0.025	0.34	5.8	0.83	0.12	35
NCS ZC11034	Laver	8.2	38	0.49	0.013	0.94	10.5	(6.2)	0.1	35
NCS ZC11035	Tomato	0.62	0.05		0.0014	0.28	11.3	0.82	0.056	35
NCS ZC11036	Cucumber		0.47	0.012	0.0023	0.15	10.9	1.1	0.065	35
NCS ZC11037	Shrimp		11	0.056	0.14	0.11	4.8	1.3	1.5	35
NCS ZC11038	Kelp	2.1	22	0.63	0.044	1.4	2.3		0.07	35
NCS ZC11039	Peanut			0.062		0.013	9.3	0.48	0.065	35
NCS ZC11040	Duck liver		0.013	0.14	0.026	0.03	240	0.1	(3.2)	35
NCS ZC11041	Salmon		1		0.063		2.2	0.075	1.2	35
NCS ZC11042	Green tea	8.3		0.037		0.97	14.7			35
NCS ZC11043	Ginger		(0.53)	0.43	0.019	0.75	5.2		(0.89)	35
NCS ZC11044	Cumin	1.2	0.35	0.069		2.3	12.2		1.07	35
NCS ZC11045	Pumpkin			0.017		0.1	6.3			35
NCS ZC11046	Sea sedge	2.9	2.9	0.41	0.01	2.6	6.7			35
NCS ZC11047	Soybean	0.12		0.023			9.5			35
		Composition (%)								
		K	Na	Ca	Mg	Fe	Zn	Mn	Al	
NCS ZC11022	Carrot	1.82	(0.68)	0.25	0.099	0.0023	0.001	0.0012	0.0005	
NCS ZC11023	Celery	1.48	1.5	1.6	0.24	0.034	0.0029	0.0039	0.031	
NCS ZC11024	Spinach	2.6	0.92	1.2	0.62	0.024	0.0029	0.006	0.019	
NCS ZC11025	Cabbage	1.1	0.23	0.44	0.18	0.0072	0.0024	0.0017	0.0012	
NCS ZC11026	Agaric	(0.87)	0.051	1.01	0.28	0.063	0.0024	0.008	0.054	
NCS ZC11027	Salmon	1.04	0.39	0.65	0.18	0.0092	0.0032	0.0027	0.0016	
NCS ZC11028	Chicken	1.58	0.16	0.02	0.12	0.0021	0.0026	0.0005		
NCS ZC11029	Beef	1.36	0.16	0.014	0.11	0.0098	0.017	0.0004		
NCS ZC11030	Pork	1.41	0.18	0.016	0.09	0.0037	0.008			
NCS ZC11031	Onion	1.21								
NCS ZC11032	Purple sweet potato	0.56	0.15	0.12	0.09	0.0028	0.00068	0.0012	0.001	
NCS ZC11033	Mushroom	2.1	0.011	0.097	0.12	0.015	0.0056	0.0024	0.012	
NCS ZC11034	Laver	2.4	0.96	0.35	0.4	0.094	0.0029	0.0048		
NCS ZC11035	Tomato	4	0.33	0.19	0.25		0.0019	0.0019	0.0025	
NCS ZC11036	Cucumber	3.9	0.28	0.54	0.42	0.024	0.0043	0.0021	0.01	
NCS ZC11037	Shrimp	0.2	6.6	0.36	0.066	0.009	0.0039	0.00047		
NCS ZC11038	Kelp	2.8	4.9	1.4	0.56	0.024	0.0018	0.0041	0.025	
NCS ZC11039	Peanut	0.87		0.055	0.23	0.0027	0.0038	0.0013	0.0006	
NCS ZC11040	Duck liver	1.08	0.34	0.017	0.085	0.086	0.022	0.0016		
NCS ZC11041	Salmon	1.6	0.33	0.043	0.14	0.002	0.0015	0.00006		
NCS ZC11042	Green tea	2		0.47	0.22	0.026	0.0045	0.095	0.044	
NCS ZC11043	Ginger	1.64		0.18	0.28		0.0021	0.037	0.018	
NCS ZC11044	Cumin	2.1	0.42	1.1	0.47		0.0037	0.0043	(0.044)	
NCS ZC11045	Pumpkin	3.1		0.17	0.16	0.0065	0.0013	0.0005	0.0025	
NCS ZC11046	Sea sedge	1.4	0.6	1.3	2.6	0.093	0.0017	0.022	0.094	
NCS ZC11047	Soybean	1.9		0.19	0.26	0.011	0.0036	0.0029		

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Number	Name	Composition (µg/g)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
NCS ZC71026	Agricultural Soils	0.78±0.08	503±24	52±4	600±16	2.30±0.10	4.37±0.26	4.9±0.4	2.61±0.13	64.2±2.8	50
NCS ZC71027	Agricultural Soils	0.53±0.06	323±17	43±6	619±18	2.31±0.12	2.84±0.17	4.9±0.4	1.62±0.07	66±4	50
NCS ZC71028	Agricultural Soils	0.20±0.03	89±5	32±4	658±14	2.51±0.16	0.97±0.10	4.60±0.29	0.53±0.02	68±5	50
NCS ZC71029	Agricultural Soils	0.094±0.007	17.4±0.9	55±5	538±21	2.42±0.14	0.483±0.024	10.2±0.6	0.66±0.06	73±5	50
NCS ZC71030	Agricultural Soils	0.131±0.011	10.3±0.5	62±6	924±34	2.28±0.15	0.50±0.04	7.1±0.9	6.48±0.20	73±5	50
NCS ZC71031	Agricultural Soils	2.11±0.19	8.4±0.4	27.0±2.2	978±30	1.96±0.13	1.19±0.06	4.2±0.6	0.50±0.04	49±3	50
NCS ZC71026	Agricultural Soils	Cl	Co	Cr	Cu	Dy	Er	Eu	F	Ga	
		83±7	12.0±0.9	55±3	128±8	5.1±0.2	2.90±0.15	1.39±0.08	439±47	17.0±0.7	
		88±5	11.7±0.9	54.1±2.9	88±4	4.62±0.15	2.61±0.10	1.26±0.05	443±36	17.3±0.9	
		77±6	11.2±1.6	55±4	37.5±1.9	4.39±0.24	2.51±0.10	1.18±0.06	429±59	17.6±0.8	
		161±13	16.5±0.9	79±5	37.0±2.6	5.21±0.29	2.95±0.16	1.37±0.07	727±49	18.8±1.1	
		99±8	50.8±1.7	79±4	30.0±2.3	5.00±0.25	2.88±0.13	1.33±0.07	506±22	15.6±0.7	
		85±8	8.2±0.4	54±4	30.1±2.1	3.25±0.17	1.96±0.10	0.98±0.07	466±15	16.5±0.9	
NCS ZC71026	Agricultural Soils	Gd	Ge	Hg	Ho	I	La	Li	Lu	Mn	
		5.35±0.16	1.65±0.12	0.058±0.011	1.04±0.05	3.09±0.27	36.6±1.7	28.5±1.3	0.46±0.04	0.107*±0.004*	
		4.88±0.22	1.61±0.15	0.10±0.04	0.92±0.06	2.65±0.23	35.4±2.4	29.0±1.7	0.414±0.021	963±41	
		4.7±0.4	1.39±0.13	0.14±0.06	0.88±0.12	2.6±0.4	34.2±2.3	30.6±1.9	0.408±0.018	782±32	
		5.6±0.4	1.35±0.07	0.031±0.005	1.04±0.07	3.00±0.21	38.8±2.5	46.9±2.8	0.45±0.04	873±30	
		5.66±0.25	1.57±0.11	0.072±0.007	1.00±0.06	3.3±0.4	36.5±1.9	41.3±2.2	0.459±0.029	872±28	
		3.4±0.2	1.31±0.13	2.50±0.13	0.69±0.03	2.49±0.26	25.2±1.6	22.7±1.4	0.331±0.019	654±28	
NCS ZC71026	Agricultural Soils	Mo	N (%)	Nb	Nd	Ni	P(%)	Pb	Pr	Rb	
		2.01±0.14	0.269±0.011	13.6±0.5	32.9±1.8	20.7±1.0	0.1074±0.0029	34.9±1.5	8.6±0.3	102±4	
		1.82±0.18	0.285±0.012	13.4±0.6	30.6±1.6	20.5±1.0	0.1183±0.0007	33.2±1.3	8.0±0.4	103±4	
		1.25±0.11	0.267±0.012	13.5±0.5	29.6±2.9	21.1±0.9	0.1175±0.0027	30.7±1.2	7.9±0.5	105±3	
		0.84±0.07	0.184±0.004	13.4±1.0	33.6±1.6	41.1±1.3	0.155±0.004	30.8±1.5	8.9±0.5	121±8	
		1.05±0.12	0.117±0.005	13.3±0.9	31.8±1.6	40.7±2.0	853**±29**	190±8	11.6±0.8	84±5	
		0.71±0.08	683**±25**	10.8±1.0	21.3±1.1	18.5±0.9	256**±8**	179±7	5.73±0.22	103±5	
NCS ZC71026	Agricultural Soils	S	Sb	Sc	Se	Sm	Sn	Sr	Tb	Th	
		441±39	1.34±0.14	10.6±0.4	0.36±0.03	6.27±0.23	11.4±0.6	192±4	0.89±0.05	10.7±0.7	
		429±43	1.18±0.09	9.7±0.5	0.29±0.05	5.81±0.16	9.9±1.2	202±5	0.8±0.04	10.8±0.5	
		432±35	1.04±0.10	9.4±0.5	0.23±0.04	5.6±0.3	4.9±1.0	216±4	0.76±0.04	11.0±0.6	
		384±32	1.49±0.07	14.5±0.6	0.297±0.022	6.5±0.4	3.39±0.20	184±7	0.92±0.05	14.4±1.1	
		524±39	1.24±0.12	10.7±0.5	1.47±0.12	6.06±0.29	26.4±2.3	208±7	0.88±0.04	11.6±0.7	
		390±27	0.66±0.07	7.6±0.5	0.26±0.03	3.96±0.16	2.61±0.20	232±10	0.56±0.04	7.6±0.4	
NCS ZC71026	Agricultural Soils	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	
		0.62±0.03	0.45±0.026	2.69±0.16	74±4	5.9±0.5	27.9±1.0	2.91±0.14	353±9	272±6	
		0.65±0.04	0.407±0.029	2.65±0.15	70±4	4.6±0.4	25.3±1.1	2.64±0.08	236±10	270±6	
		0.692±0.027	0.39±0.06	2.52±0.12	69±4	2.60±0.17	23.8±1.3	2.50±0.10	133±6	273±8	
		0.77±0.06	0.447±0.027	2.6±0.3	101±6	2.10±0.15	27.8±1.0	2.84±0.17	108±5	180±6	
		0.59±0.04	0.451±0.021	2.47±0.16	87±4	1.72±0.08	26.8±1.2	2.88±0.14	312±11	837±30	
		0.57±0.04	0.325±0.013	1.73±0.11	54.6±2.5	2.15±0.17	18.3±0.9	2.10±0.08	96±4	229±12	
NCS ZC71026	Agricultural Soils	F(water soluble)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	
		6.1±1.1	61.4±0.5	13.53±0.23	5.43±0.07	1.219±0.023	3.45±0.07	1.98±0.07	2.54±0.05	2.76±0.09	
		6.1±1.0	61.7±0.5	13.46±0.20	4.93±0.06	1.162±0.019	2.92±0.05	1.99±0.07	2.60±0.06	3.38±0.14	
		6.9±1.3	63.5±0.6	13.63±0.16	4.20±0.06	1.061±0.029	2.00±0.04	1.99±0.06	2.72±0.06	3.54±0.11	
		7.6±1.7	52.7±0.4	14.28±0.29	5.79±0.15	2.63±0.11	6.78±0.22	1.18±0.06	2.67±0.09	2.88±0.15	
		24±5	68.43±0.25	12.76±0.23	4.59±0.09	1.19±0.04	1.65±0.06	1.53±0.06	2.01±0.05	1.81±0.09	
		10.2±1.4	71.58±0.29	13.19±0.18	3.57±0.10	0.707±0.019	0.94±0.05	2.04±0.07	2.98±0.10	0.68±0.04	

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		Composition (µg/g)										Unit Size (in g)
Number	Name	Ag	As	B	Ba	Be	Bi	Br	Cd	Ce		
NCS ZC71026	Agricultural Soils	2.53±0.11	0.413±0.007									
NCS ZC71027	Agricultural Soils	3.11±0.13	0.390±0.008									
NCS ZC71028	Agricultural Soils	3.19±0.12	0.369±0.009									
NCS ZC71029	Agricultural Soils	1.65±0.07	0.377±0.012									
NCS ZC71030	Agricultural Soils	1.70±0.08	0.380±0.013									
NCS ZC71031	Agricultural Soils	0.66±0.04	0.264±0.012									
NCS ZC71032	Agricultural Soils	7.7±1.0	71.3±2.9	38±4	654±23	1.52±0.06	11.0±0.5	2.3±0.6	16.5±0.7	45.8±1.6	50	
NCS ZC71033	Agricultural Soils	0.098±0.008	13.5±0.4	65.8±2.9	477±12	2.37±0.09	0.427±0.022	6.7±0.5	0.218±0.010	78±3	50	
NCS ZC71034	Agricultural Soils	0.129±0.013	18.6±0.8	47±4	517±19	2.30±0.15	0.511±0.021	4.2±0.8	0.319±0.016	72±5	50	
NCS ZC71035	Agricultural Soils	0.42±0.03	11.9±0.4	48±5	0.182*±0.006*	2.99±0.24	4.0±0.5	2.32±0.27	0.68±0.07	235±10	50	
NCS ZC71036	Agricultural Soils	1.11±0.12	9.48±0.24	45±5	0.1277*±0.0027*	1.88±0.08	2.52±0.22	3.1±0.5	1.11±0.08	85±5	50	
NCS ZC71037	Agricultural Soils	1.39±0.17	27.2±1.4	61±6	556±17	2.43±0.17	2.58±0.21	2.63±0.25	13.3±0.7	80±8	50	
NCS ZC71032	Agricultural Soils	100±8	25.6±0.7	55.6±2.1	358±22	3.11±0.12	1.78±0.11	1.00±0.05	625±37	14.9±0.7		
NCS ZC71033	Agricultural Soils	91±7	13.38±0.27	69.1±2.6	25.9±1.0	5.3±0.3	3.04±0.15	1.32±0.07	640±20	17.5±1.0		
NCS ZC71034	Agricultural Soils	137±7	15.8±0.7	0.252*±0.010*	70±5	5.02±0.28	2.83±0.16	1.32±0.06	810±35	21.7±1.1		
NCS ZC71035	Agricultural Soils	55±4	16.6±1.3	75±5	47±4	6.5±0.6	3.64±0.22	2.62±0.18	0.102*±0.004*	18.2±1.8		
NCS ZC71036	Agricultural Soils	73±7	14.2±1.0	67±5	130±7	4.71±0.26	2.67±0.10	1.40±0.09	558±18	15.7±1.5		
NCS ZC71037	Agricultural Soils	63±8	17.3±0.8	121±6	106±4	5.6±0.6	3.19±0.21	1.40±0.11	603±18	18.1±1.9		
NCS ZC71032	Agricultural Soils	3.47±0.18	1.89±0.07	6.36±0.29	0.62±0.03	0.94±0.13	23.8±0.9	29.4±1.4	0.264±0.016	0.101*±0.004*		
NCS ZC71033	Agricultural Soils	5.6±0.4	1.48±0.06	0.070±0.004	1.06±0.06	2.93±0.18	40.9±1.9	46.1±1.6	0.457±0.029	652±20		
NCS ZC71034	Agricultural Soils	5.5±0.4	2.33±0.14	0.121±0.008	1.00±0.07	2.0±0.4	38.2±1.7	46.5±2.0	0.42±0.04	717±22		
NCS ZC71035	Agricultural Soils	9.9±1.1	1.50±0.07	0.120±0.018	1.26±0.08	1.37±0.08	150±9	38.1±2.8	0.52±0.04	0.118*±0.003*		
NCS ZC71036	Agricultural Soils	5.3±0.7	1.34±0.05	6.3±0.4	0.96±0.08	1.61±0.09	49±4	28.7±1.9	0.410±0.026	690±20		
NCS ZC71037	Agricultural Soils	6.0±0.7	1.53±0.08	1.29±0.08	1.11±0.10	1.78±0.21	41±4	47.0±2.1	0.47±0.05	909±26		
NCS ZC71032	Agricultural Soils	14.0±0.4	696**±32**	8.6±0.6	21.9±1.0	30.0±1.0	959±53	538±21	5.63±0.23	102±4		
NCS ZC71033	Agricultural Soils	1.12±0.07	0.125±0.004	15.2±0.6	34.1±2.0	32.6±1.3	765±24	28.0±1.5	9.1±0.5	96±4		
NCS ZC71034	Agricultural Soils	12.5±0.6	0.246±0.012	12.3±0.7	33.6±1.8	236±10	0.212*±0.006*	34.4±1.4	8.8±0.5	106±4		
NCS ZC71035	Agricultural Soils	43±4	0.122±0.005	19.6±1.2	84±5	32.3±1.7	887±38	265±14	24.9±1.4	121±7		
NCS ZC71036	Agricultural Soils	19.2±1.5	0.113±0.002	13.3±1.0	35.9±1.9	26.8±1.6	933±20	637±34	9.9±0.7	99±6		
NCS ZC71037	Agricultural Soils	1.35±0.09	0.233±0.007	15.3±1.2	35.1±2.3	40.7±2.8	0.227*±0.008*	287±18	9.3±0.7	116±6		
NCS ZC71032	Agricultural Soils	1.33*±0.24*	6.0±0.5	9.1±0.4	0.46±0.05	4.10±0.16	3.25±0.23	166±5	0.557±0.022	6.2±0.5		
NCS ZC71033	Agricultural Soils	481±55	1.10±0.05	12.8±0.5	0.606±0.028	6.5±0.4	3.33±0.18	181±5	0.92±0.05	13.4±0.7		
NCS ZC71034	Agricultural Soils	652±43	1.91±0.16	14.3±0.5	1.07±0.10	6.4±0.3	4.5±0.6	140±5	0.88±0.04	13.7±1.0		
NCS ZC71035	Agricultural Soils	576±41	1.42±0.10	13.0±0.7	0.272±0.024	11.7±0.7	3.5±0.5	232±8	1.26±0.08	12.5±1.0		
NCS ZC71036	Agricultural Soils	499±29	1.33±0.08	11.5±0.8	0.36±0.05	6.3±0.5	2.78±0.23	317±7	0.83±0.08	13.1±0.9		
NCS ZC71037	Agricultural Soils	566±14	6.7±0.6	13.7±0.7	0.52±0.04	6.8±0.5	4.81±0.18	117±5	0.96±0.08	14.3±1.5		
NCS ZC71032	Agricultural Soils	0.97±0.05	0.267±0.012	2.24±0.14	71.9±1.7	44±3	17.0±1.0	1.73±0.09	0.231*±0.008*	123±3		
NCS ZC71033	Agricultural Soils	0.62±0.03	0.464±0.027	2.73±0.12	88.5±2.9	1.97±0.15	28.8±1.2	2.92±0.17	77.0±2.9	234±8		
NCS ZC71034	Agricultural Soils	0.702±0.027	0.43±0.03	4.99±0.28	106±8	4.32±0.24	26.9±1.5	2.81±0.20	128±7	136±7		
NCS ZC71035	Agricultural Soils	0.88±0.09	0.54±0.05	4.3±0.5	100±5	10.8±1.1	33.7±2.5	3.45±0.22	158±6	216±5		
NCS ZC71036	Agricultural Soils	0.59±0.06	0.415±0.027	2.25±0.20	82±4	33.8±2.9	25.5±1.7	2.55±0.14	217±10	276±7		
NCS ZC71037	Agricultural Soils	0.88±0.10	0.48±0.05	2.57±0.21	97±5	4.0±0.5	30.4±2.2	3.05±0.19	707±28	245±9		

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		F (watersoluble)	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	
NCS ZC71032	Agricultural Soils	8.8±1.0	61.4±0.5	10.87±0.18	7.83±0.23	1.80±0.05	4.52±0.16	1.23±0.05	2.54±0.09	1.11±0.08	
NCS ZC71033	Agricultural Soils	14.1±1.4	59.7±0.2	13.57±0.09	4.81±0.11	2.08±0.05	4.98±0.15	1.43±0.05	2.25±0.07	2.69±0.09	
NCS ZC71034	Agricultural Soils	19.6±2.5	42.5±0.25	14.03±0.21	14.4±0.6	2.29±0.07	6.19±0.22	0.70±0.04	2.43±0.06	3.86±0.13	
NCS ZC71035	Agricultural Soils	6.6±0.9	62.3±0.4	12.31±0.17	6.11±0.07	2.86±0.06	2.74±0.07	1.21±0.05	2.88±0.15	1.88±0.08	
NCS ZC71036	Agricultural Soils	9.1±1.1	69.1±0.6	12.19±0.13	5.05±0.11	1.48±0.06	1.61±0.05	1.86±0.09	2.56±0.10	1.15±0.04	
NCS ZC71037	Agricultural Soils	5.7±0.6	62.6±0.4	13.69±0.25	5.73±0.14	1.73±0.04	1.81±0.05	1.12±0.04	2.33±0.11	2.43±0.09	
		Corg (%)	Ti (%)								
NCS ZC71032	Agricultural Soils	0.92±0.04	0.273±0.012								
NCS ZC71033	Agricultural Soils	1.74±0.09	0.411±0.008								
NCS ZC71034	Agricultural Soils	2.72±0.11	0.340±0.011								
NCS ZC71035	Agricultural Soils	1.23±0.06	0.443±0.013								
NCS ZC71036	Agricultural Soils	1.13±0.04	0.389±0.008								
NCS ZC71037	Agricultural Soils	2.21±0.06	0.424±0.012								
Number	Name	µg/g									Unit Size (in g)
NCS ZC71064	Cr (VI) in Soil	0.92									50
NCS ZC71065	Cr (VI) in Soil	2.9									50
NCS ZC71066	Cr (VI) in Soil	3.8									50
NCS ZC71067	Cr (VI) in Soil	7.1									50
NCS ZC71068	Cr (VI) in Soil	68									50
Number	Name	Composition (µg/g)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
NCS ZC71069	Contaminated Soils	1.52±0.21	31.4±0.6	35.9±2.7	523±15	2.82±0.10	5.18±0.14	0.72±0.20	9.5±0.4	85.6±2.7	70
NCS ZC71070	Contaminated Soils	0.50±0.07	14.0±0.7	63.6±1.2	482±15	2.30±0.13	0.68±0.03	4.07±0.23	0.24±0.04	85.2±2.9	70
NCS ZC71071	Contaminated Soils	0.10±0.02	402±16	36.5±2.5	429±15	3.53±0.14	0.44±0.02	3.2±0.7	0.13±0.02	81±4	70
NCS ZC71072	Contaminated Soils	0.15±0.02	10.2±0.4	93±4	454±13	2.17±0.09	0.49±0.05	4.19±0.29	12.9±0.8	87.8±2.5	70
		Cl	Co	Cr	Cu	F	Ga	Ge	Hg	I	
NCS ZC71069	Contaminated Soils	46±6	14.8±0.6	39.2±2.7	33.4±0.9	990±62	20.7±0.6	1.52±0.04	0.053±0.003	0.65±0.11	
NCS ZC71070	Contaminated Soils	86±7	13.1±0.5	78±4	68.9±2.1	510±21	16.4±0.7	1.46±0.04	1.63±0.12	1.28±0.11	
NCS ZC71071	Contaminated Soils	58±7	45.0±2.3	176±7	306±15	1700±84	22.3±1.0	1.58±0.07	0.36±0.03	2.70±0.13	
NCS ZC71072	Contaminated Soils	69±5	17.4±0.6	73.3±2.8	37.3±1.0	478±32	15.3±0.6	1.47±0.06	0.18±0.01	1.66±0.13	
		La	Li	Mn	Mo	N	Nb	Ni	P	Pb	
NCS ZC71069	Contaminated Soils	45.6±1.6	31.4±1.2	2614±85	2.26±0.12	206±26	17.9±0.8	26.0±0.6	1241±18	173±7	
NCS ZC71070	Contaminated Soils	45.8±1.3	38.4±1.2	451±12	0.68±0.04	0.220±0.011*	17.7±0.5	32.0±1.3	750±18	75.4±1.9	
NCS ZC71071	Contaminated Soils	44.7±1.3	37.7±1.0	1011±37	4.55±0.22	719±21	15.1±1.0	82.4±2.3	681±19	20.3±1.1	
NCS ZC71072	Contaminated Soils	46.2±1.6	44.3±2.5	533±14	0.91±0.05	1977±81	17.9±0.8	27.4±0.8	534±25	135±4	
		Rb	S	Sb	Sc	Se	Sn	Sr	Th	Tl	
NCS ZC71069	Contaminated Soils	117±4	126±12	7.0±0.8	13.5±0.3	0.23±0.04	5.4±0.4	63.2±1.9	13.8±0.4	1.01±0.05	
NCS ZC71070	Contaminated Soils	94.2±2.0	448±25	2.1±0.6	12.2±0.4	0.46±0.04	36±4	109±3	14.4±0.5	0.67±0.12	
NCS ZC71071	Contaminated Soils	75.1±1.5	202±20	15.8±1.3	14.3±0.3	0.55±0.05	3.6±0.4	185±6	10.5±0.2	7.9±0.5	
NCS ZC71072	Contaminated Soils	86.2±2.1	488±31	1.74±0.21	11.1±0.3	2.92±0.17	16.8±1.2	111±4	14.5±0.4	0.62±0.05	
		U	V	W	Y	Zn	Zr	SiO ₂ (%)	Al ₂ O ₃ (%)	TFe ₂ O ₃ (%)	
NCS ZC71069	Contaminated Soils	3.41±0.09	118±4	2.61±0.19	50.3±3.0	649±29	232±4	62.3±0.7	16.3±0.6	7.66±0.12	
NCS ZC71070	Contaminated Soils	2.93±0.20	93±4	2.89±0.25	31.9±1.2	182±6	289±10	69.0±0.9	12.70±0.11	4.98±0.12	
NCS ZC71071	Contaminated Soils	2.43±0.09	128±5	30.9±2.0	21.5±1.5	82±5	149±6	52.1±1.0	15.14±0.14	15.00±0.30	
NCS ZC71072	Contaminated Soils	2.97±0.19	87±4	2.57±0.18	32.1±1.7	116±10	356±11	71.8±0.8	11.7±0.4	4.39±0.08	
		MgO (%)	CaO (%)	Na ₂ O (%)	K ₂ O (%)	TC (%)	Corg (%)	Ti (%)	pH		
NCS ZC71069	Contaminated Soils	1.06±0.09	2.02±0.09	0.16±0.02	2.73±0.08	0.10±0.02	0.083±0.021	0.512±0.013	7.58±0.14		
NCS ZC71070	Contaminated Soils	0.85±0.03	0.96±0.03	1.23±0.03	1.63±0.04	2.61±0.05	2.46±0.08	0.508±0.016	6.23±0.10		
NCS ZC71071	Contaminated Soils	2.40±0.05	3.14±0.09	1.09±0.02	1.90±0.05	0.97±0.04	0.75±0.03	0.372±0.013	7.88±0.10		
NCS ZC71072	Contaminated Soils	0.67±0.04	1.00±0.05	1.07±0.03	1.50±0.03	2.05±0.07	2.00±0.06	0.519±0.022	7.31±0.13		

Section 10 Environmental

Number	Name	Content	Certified Value (mg/L)	Base	Unit Size (ml)
NCS ZC 71301	COD Certified Reference Material	COD _{Cr}	200	H ₂ O	20
NCS ZC 71302	COD Certified Reference Material	COD _{Cr}	1007	H ₂ O	20
NCS ZC 71303	COD Certified Reference Material	COD _{Cr}	2010	H ₂ O	20
NCS ZC 71304	COD Certified Reference Material	COD _{Mn}	31	H ₂ O	20
NCS ZC 71305	COD Certified Reference Material	COD _{Mn}	81	H ₂ O	20
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as AsO33-	
NCS ZC 76026	Arsenious Acid Solution	1.011±0.016μ mol/g,	calculated as As: 75.7±1.2μ g/g	124.3±2.0μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as AsO43-	
NCS ZC 76027	Arsenic Acid Solution	0.233±0.005μ mol/g	calculated as As: 17.5±0.4μ g/g	32.4±0.7μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as (C2H7AsO2)	
NCS ZC 76029	Dimethylarsinic Acid Solution	0.706±0.024μ mol/g	calculated as As: 52.9±1.8μ g/g	97.4±3.3μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as (C5H11AsO2)	
NCS ZC 76030	Arsenobetaine Solution	0.518±0.015μ mol/g	calculated as As: 38.8±1.1μ g/g	92.2±2.7μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as C5H14AsBrO	
NCS ZC 76031	Arsenocholine Solution	0.374 ± 0.015μ mol/g	calculated as As: 28.0 ± 1.1μ g/g	91.6 ± 3.7μ g/g	2
Number	Name	Certified Value (10 ⁻²)			Unit Size (ml)
NCS ZC76032	Water content of liquid	1			10
NCS ZC76033	Water content of liquid	0.1066			10
NCS ZC76034	Water content of liquid	0.0139			10
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as SeO32-	
NCS ZC 76035	Selenite in water	0.543 ± 0.011μ mol/g	calculated as Se: 42.9 ± 0.9μ g/g	68.9 ± 1.4μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as SeO42-	
NCS ZC 76036	Selenate in water	0.525 ± 0.017μ mol/g	calculated as Se: 41.5 ± 1.3μ g/g	75.1 ± 2.4μ g/g	2
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as C5H11NO2Se	
NCS ZC 76037	Selenomthionine in water	0.499 ± 0.013μ mol/g	calculated as Se: 39.4 ± 1.0μ g/g	97.9 ± 2.5μ g/g	2
Number	Name	Certified Value (mg/kg)			Unit Size (in g)
NCS ZC 76038	Nicotinamide in infant formula	65.3			30
Number	Name	Certified Value (μg/ml)	Certified Value (10 ⁻²)		Unit Size (ml)
NCS ZC 76039	Deca-BDE in iso-octane/toluene(9:1)	50			1.0 ml/btl
NCS ZC 76046	water content of water saturated octanol		4.85		5
Number	Name	Certified Value (μg/mL)	Base		Unit Size (ml)
NCS ZC 76331	CODCr	100	0.05mol/L		20
NCS ZC 76332	CODMn	238			20
Number	Name	Certified Value and Extended Uncertainty (k=2)			Unit Size (ml)
		Concentration in Mol	Concentration in Mass	Calculated as C4H9NO2Se+HCl	
NCS ZC 76333	(Methyl)Seleno-Cysteine in water	0.442 ± 0.012μ mol/g	calculated as Se: 34.8 ± 1.0μ g/g	96.6 ± 2.6μ g/g	2
Number	Name	Certified Value (mg/mL)			Unit Size (ml)
NCS ZC 76334	Formaldehyde in water	10.1			2
Number	Name	Certified Value (μg/mL)			Unit Size (ml)
				Matrix	
NCS ZC 76335	N-NO ₂ in water	100 (standardized by nitrogen)		H ₂ O	20

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Number	Name	Hg	Certified Value(mg/g)				Unit Size (in g)		
NCS ZC83006	Mercury in Cosmetic(Cream)	0.67					5		
NCS ZC83007	Mercury in Cosmetic(Cream)	1.35					10		
NCS ZC83008	Mercury in Cosmetic(Cream)	12.9					5		
Number	Name	Methylparaben	Propylparaben	Ethylparaben	Butylparaben	Unit Size (in g)			
NCS ZC83009	Parabens in Cosmetics	1945.8	995.8	980.1	1013.8	15			
Number	Name	Level	Pb	Level	Certified Value(µg/L)	Cd	Level	Cd	Unit Size (ml)
NCS ZC 93019	Lead of Freeze-dried Human Urine	L	101	H	305				5
NCS ZC 93020	Cadmium of Freeze-dried Human Urine				L	5.34	H	15.5	5

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Alt	Ti	Als	Sn	As	
NCS AH 11302a	Low Alloy steel	0.078	0.117	1.85	0.0071	0.0027	0.017	0.0048	0.016	0.033	0.1	0.032			Φ37×40
NCS AH 11311a	60Si ₂ Mn	0.583	1.72	0.78	0.013	0.0062	0.158	0.03	0.087				0.0087	0.012	Φ37×40
		Mo													
NCS AH 11311a	60Si ₂ Mn	0.014													
Number	Name	Chemical Composition(percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Alt	B	Mo		
NCS AH 11316e	Carbon Steel	0.201	0.207	0.487	0.018	0.006	0.011	0.004	0.0047						Φ37×40
NCS AH 11319	Carbon Steel	0.101	0.249	0.400	0.043	0.030	0.068	0.066	0.086		0.264	0.0014			Φ37×45
NCS AH 11320c	Alloy Steel	0.164	0.401	1.46	0.014	0.0097	0.046	0.016	0.018						Φ37×40
NCS AH 11322c	Carbon Steel	0.461	0.293	0.598	0.016	0.0013	0.02	0.012	0.011	0.0029	0.024				Φ37×45
NCS AH 11324e	Carbon Steel	0.245	0.185	0.547	0.016	0.019	0.026	0.038	0.201				0.0085		Φ37×40
NCS AH 11334	G Cr 15	1.02	0.250	0.340	0.015	0.023	1.48	0.036	0.037	0.022					D36×50
		Sn As N Als Ca													
NCS AH 11319	Carbon Steel	0.0024	0.0058												
NCS AH 11320c	Alloy Steel		0.0061												
NCS AH 11322c	Carbon Steel	0.012	0.007	0.010	0.022	0.0013									
NCS AH 11324e	Carbon Steel	0.028	0.017												
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	As	Sn	Alt	
NCS AH 11339d	GCr15SiMn	1.18	0.842	1.02	0.018	0.006	1.44	0.046	0.152	0.027					Φ38×40
NCS AH11340c	Alloy Structure Steel	0.134	0.239	0.5	0.0094	0.0078	0.979	0.046	0.074	0.444		0.0073	0.0043		Φ38×40
NCS AH 11341c	42CrMo	0.424	0.283	0.615	0.013	0.0035	0.984	0.185	0.085	0.221		0.0082		0.02	Φ38×40
NCS AH11341d	Alloy Steel	0.396	0.248	0.566	0.023	0.0056	0.953	0.05	0.05	0.029		0.16			Φ37×40
NCS AH 11344	CrWMn	0.964	0.266	0.947	0.023	0.006	1.06	0.02	0.128	0.034	1.42				Φ38×40
		Sn*													
NCS AH11341c	42CrMo	0.0089													

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti	
NCS AH 11351c	Pure iron	0.0017	0.0051	0.124	0.0079	0.0064	0.016	0.003	0.0071			0.0011		0.068	Φ38×40
NCS AH 11353	Cast iron	3.15	2.3	0.47	0.02	0.0006	0.025	0.59	0.029	0.032	0.003	0.002	0.015	0.027	Φ30×25
		Sn	N	Alt	B	Mg									
NCS AH 11351c	Pure iron		(0.001)	0.03											
NCS AH 11353	Cast iron	0.0037	0.003	0.023	0.004	0.029									
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	
NCS AH 11354a	R _E -Mg Cast Iron	2.25	2.66	1.17	0.375	0.095	0.493	0.623	1.65	0.072	0.518				Φ31×24
NCS AH 11355a	R _E -Mg Cast Iron	4.07	1.45	0.22	0.054	0.041	2.12	1.46	0.266	0.073	0.09				Φ31×24
NCS AH 11356a	R _E -Mg Cast Iron	3.78	2.47	0.618	0.084	0.021	0.175	0.522	0.68	0.079	0.265				Φ31×24
		Sn	B	Mg	Ti	Mo	W	Nb	Co	La*	Ce*				
NCS AH 11354a	R _E -Mg Cast Iron	0.046	0.055	0.0056	0.184	0.253	0.434	0.117	0.094	0.0013	0.0033				
NCS AH 11355a	R _E -Mg Cast Iron	0.146	0.013	0.0024	0.042	0.724	0.039	0.022	0.027	0.0003	0.0006				
NCS AH 11356a	R _E -Mg Cast Iron	0.076	0.041	0.054	0.085	0.344	0.105	0.037	0.032	0.02	0.045				
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Alt	Co	
NCS AH 11357	Alloy Structure Steel	0.147	0.369	1.11	0.019	0.015	0.0091	0.0053	0.016						Φ38×40
NCS AH 11358	Alloy Structure Steel	0.402	0.226	0.690	0.011	0.0083	0.95	0.015	0.015	0.0045					Φ36×40
NCS AH11358c	Alloy Steel	0.39	0.243	0.583	0.02	0.0061	0.848	0.014	0.011						Φ37×40
NCS AH 11359	Alloy Structure Steel	0.225	0.220	0.616	0.013	0.0081	0.815	0.012	0.0081	0.0046	0.0032				Φ37×40
NCS AH11359b	Alloy Steel	0.212	0.22	0.59	0.0074	0.013	0.803	0.011	0.0094	0.0034					Φ37×40
NCS AH11359c	Alloy Steel	0.212	0.247	0.579	0.017	0.0078	0.782	0.042	0.016						Φ37×40
NCS AH 11360	Stainless Steel	0.058	0.854	1.49	0.027	0.010	17.39	11.91	0.168	0.043	0.366	2.33	0.046	0.105	Φ36×30
NCS AH 11363	Alloy tool Steel	0.482	0.63	0.158	0.021	0.0086	1.15	0.078	0.094			0.026			Φ35×35
		W	As												
NCS AH11359b	Alloy Steel		0.0024												
NCS AH 11360	Stainless Steel	0.060													
NCS AH 11363	Alloy tool Steel	2.16													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Ni	Cr	Cu	V	Ca	Als	Alt	Sn	
NCS AH 11364	Carbon Steel	0.057	0.026	0.121	0.010	0.0032	0.010	0.016	0.0087	0.0010	0.0019	0.032	0.034	0.0097	Φ38×40
NCS AH 11365	line pipe steel	0.054	0.266	1.53	0.011	0.0052	0.05	0.013	0.010	0.014	0.0015	0.019	0.021	0.017	Φ38×40
NCS AH 11366	stainless steel 2Cr13	0.176	0.388	0.501	0.024	0.0036	0.115	12.29	0.074	0.024					Φ37×30
NCS AH 11367	stainless steel 316L	0.017	0.476	0.847	0.034	0.0008	10.23	16.65	1.09	0.066			(0.007)	0.032	Φ38×30
NCS AH 11368	stainless steel 304	0.066	0.76	1.16	0.030	0.0091	8.23	17.49	0.355	0.061			0.014	0.012	Φ38×30
NCS AH 11369	stainless steel 304L	0.026	0.522	0.857	0.033	0.0020	8.11	18.18	0.445	0.068			(0.004)	0.013	Φ38×30
NCS AH 11370	stainless steel 321(0Cr18Ni10Ti)	0.046	0.609	1.18	0.027	0.016	11.65	17.57	0.199	0.075			0.053	0.011	Φ33×30
NCS AH 11371	stainless steel(9Cr18)	0.95	0.487	0.315	0.027	0.003	0.171	17.70	0.064	0.022			0.014	0.0063	Φ33×30
NCS AH 11372	stainless steel 630(0Cr17Ni4CuNb)	0.037	0.552	0.604	0.041	0.0056	4.12	15.73	3.46	0.067			(0.004)	0.019	Φ38×30
NCS AH 11374	stainless steel(CrMnN)	0.085	0.458	11.03	0.032	0.014	0.68	13.79	1.16	0.056				0.012	Φ38×30
NCS AH 11375	high speed tool steel(W6Mo5Cr4V2)	0.84	0.305	0.328	0.028	0.015	0.090	3.89	0.103	1.83				0.012	Φ38×30
NCS AH 11376	high speed tool steel(W18Cr4V)	0.72	0.300	0.227	0.027	0.026	0.074	4.09	0.107	1.12			(0.005)	0.028	Φ33×30
NCS AH 11377	Cast iron	2.13	4.03	0.722	0.47	0.027	0.144	0.136	0.344	0.062				0.0168	Φ32×19

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

		As	N	W	Co	MO	Nb	Ti	La	Ce	Mg	Sb			
NCS AH 11364	Carbon Steel	0.0051	0.010			0.209	0.039	0.015							
NCS AH 11365	line pipe steel	0.012	0.0085		0.032	0.013									
NCS AH 11366	stainless steel 2Cr13			0.045	0.144	2.08	0.012								
NCS AH 11367	stainless steel 316L			0.021	0.099	0.205	0.011	(0.0007)							
NCS AH 11368	stainless steel 304			0.015	0.152	0.119	0.0052	0.006							
NCS AH 11369	stainless steel 304L			0.036	0.057	0.438	0.0039	(0.002)							
NCS AH 11370	stainless steel321(0Cr18Ni10Ti)			0.037	0.018	0.014		0.325							
NCS AH 11371	stainless steel(9Cr18)			0.054	0.067	0.191	0.287								
NCS AH 11372	stainless steel 630(0Cr17Ni4CuNb)			0.050	0.079	0.255	0.007								
NCS AH 11374	stainless steel(CrMnN)		0.136	5.93	0.017	5.08									
NCS AH 11375	high speed tool steel(W6Mo5Cr4V2)			17.45	0.019	0.076		(0.003)							
NCS AH 11376	high speed tool steel(W18Cr4V)					0.063		0.056	0.011	0.019	0.049	0.039			
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
NCS AH 11386	High Chromium Cast Iron	C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Ti	Nb	Al	
NCS AH 11387	High Chromium Cast Iron	2.96	0.87	1.18	0.047	0.053	13.57	0.559	0.546	0.175	0.346	0.02	0.025		Φ30×24
NCS AH11387	High Chromium Cast Iron	2.33	1.13	0.614	0.102	0.1	5.43	0.373	0.979	0.454	0.212	0.053	0.032	0.136	Φ30×24
NCS AH11394	Stainless Steel	0.116	0.417	0.392	0.024	0.029	12.11	0.124	0.126	0.031	0.059				Φ37×35
NCS AH11395	Alloy Steel	0.0025	0.0047	1.16	0.075	0.0038	0.02	0.005	0.015			0.021	0.019		Φ37×40
NCS AH11396	Carbon Steel	0.307	0.249	0.571	0.015	0.052	0.175	0.138	0.02	0.0019		0.012			Φ37×40
		As	Co	Als	Alt	N	Ca								
NCS AH11394	Stainless Steel		0.026			0.013									
NCS AH11395	Alloy Steel			0.038	0.039										
NCS AH11396	Carbon Steel	0.011	0.021	0.019	0.021		0.0022								
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
NCS AH11399	Alloy Structure Steel	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Co	Alt	As	
NCS AH11400	Spring Steel	0.279	0.253	0.558	0.0088	0.0019	0.938	0.033	0.058	0.166	0.0053	0.0082	0.029	0.0058	D38×40
NCS AH11400	Spring Steel	0.665	0.257	0.909	0.016	0.016	0.073	0.038	0.099	0.018	0.0013	0.01		0.0063	D37×40
		Sn													
NCS AH11399	Alloy Structure Steel	0.004													
NCS AH11400	Spring Steel	0.0047													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
NCS AH 18305	Carbon Steel	C	Si	Mn	P	S									
NCS AH 18305	Carbon Steel	0.094	0.229	0.55	0.015	0.018									Φ37×30
NCS AH 18306	Carbon Steel	0.196	0.223	0.465	0.014	0.012									Φ37×30
NCS AH 18307	Carbon Steel	0.455	0.22	0.582	0.021	0.01									Φ37×30
NCS AH 18310	Carbon Steel	0.689	0.279	0.581	0.008	0.015									Φ37×30
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
NCS AH 20304	60SiMnA	C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Al			
NCS AH 20304	60SiMnA	0.588	0.012	0.699	0.015	1.72	0.258	0.042		0.102		0.010	Φ42×40		
NCS AH 20305	50CrVA	0.497	0.018	0.629	0.011	0.253	0.944	0.062		0.122	0.143	0.020	Φ42×40		
NCS AH 20306	35CrMo	0.376	0.018	0.534	0.026	0.283	1.00	0.110	0.197	0.096		0.037	Φ42×40		
NCS AH 20307	12CrMoV	0.109	0.014	0.527	0.011	0.247	1.04	0.064		0.095	0.203	0.032	Φ42×40		
NCS AH 20309	40Cr	0.406	0.020	0.629	0.019	0.302	1.01	0.068		0.105		0.030	Φ42×40		

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

Number		Name	Chemical Composition(Percent)												Unit Size (mm)	
			C	Si	Mn	P	S	Cr	Mo	Cu	V	Ti	Al	Ni		Nb
NCS AH 20311	Steel	0.0058	0.0049	0.031	0.0069	0.0064	0.015	(0.0004)	0.006	0.00014	0.00013	0.01	0.0047	(<0.0015)	Φ35×40	
NCS AH 20312	Steel	0.011	0.179	0.19	0.049	0.0034	27.77	0.0095	0.022	0.032		0.046	0.34	0.11	Φ35×40	
NCS AH 20313	Steel			10.34			8.52			0.44	0.91	0.83	6.51		Φ35×40	
NCS AH 20314	Steel	0.262	2.65	2.27	0.007	0.041	0.973	2.9	0.396		0.019		25.14		Φ35×40	
		B	W	N	Pb	Bi	Sb	As	Sn	Ca						
NCS AH 20311	Steel	<0.001	(<0.001)	0.0039	(<0.00015)	(<0.0001)	0.0002	0.0006	0.0005	(<0.0003)						
NCS AH 20312	Steel	0.0083	0.25		0.0042		0.008	0.0031	0.0019							
NCS AH 20313	Steel			0.044				0.007	0.018	(<0.0015)						
NCS AH 20314	Steel	0.001	0.028													
Number		Name	C	Si	Mn	P	S	Ni	Cr	Mo	V	Cu	Alt	B*	Ti*	Unit Size (mm)
NCS AH 20317	SL9N590	0.072	0.30	1.13	0.006	0.021	8.84	0.21	0.056			0.048	0.026			Φ40×45
NCS AH 20318	20Mn23AlV	0.220	0.31	23.92	0.016	0.0056	0.02	0.054			0.124	0.016	2.57			Φ40×45
NCS AH20319	High phosphorus Steel	0.002	0.44	0.501	0.108	0.0021	0.0095	0.013	0.002	0.0003	0.0033	0.0006	0.0005	0.0002		Φ40×40
NCS AH20320	High Alloy steel	0.102	1.44	11.84	0.051	0.018	3.16	14.99	2.11	0.137	0.125	0.2				Φ38×36
		Co	Nb	As	Sn	N										
NCS AH20319	High phosphorus Steel	0.0016	0.0004	0.0029	0.0004											
NCS AH20320	High Alloy steel		0.361			0.175										
Number		Name	C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Sb	B	Unit Size (mm)	
NCS AH 21309	Middle Low Alloy	0.701	0.039	2.06	0.013	0.042	0.065	0.026	0.003	0.022	0.094	0.0034	0.0041			Φ40×40
NCS AH 21310	Stainless Steel	0.082	0.030	1.15	0.020	0.429	17.63	10.04	2.00	1.01	1.04					Φ40×40
NCS AH 21311	High Speed tool Steel	0.856	0.005	0.312	0.017	0.33	3.93	0.048	4.83	0.261	1.90					Φ40×40
NCS AH 21312	High Manganese Steel	0.297	0.117	16.24	0.033	0.48	0.69	0.43	0.506	0.208	0.23					Φ40×40
NCS AH 21313	High Speed tool Steel	0.75	0.002	0.16	0.017	0.282	4.20	0.041	0.10	0.137	0.17					Φ40×40
NCS AH 21314	Stainless steel	0.100	0.0022	19.56	0.0207	0.359	19.87	0.279	0.205	0.059						Φ40×40
NCS AH21315	High Alloy steel	0.029	0.056	6.92	0.012	0.3	23.86	8.98	3.26	0.6	0.38					Φ38×36
		Ti	Sn	Alt	W	Co	As	Nb	Ta	Ca	Al	N	B*			
NCS AH 20309	Middle Low Alloy		0.017	0.107	0.193	0.010	0.017	0.313	0.098	0.0009						
NCS AH 20311	High Speed tool Steel	0.17		0.36	6.25	4.86										
NCS AH 20312	High Manganese Steel	0.045		2.98	0.35	0.032										
NCS AH 20313	High Speed tool Steel		0.045		17.99	0.010	0.027									
NCS AH 21314	Stainless steel					0.021						0.008	0.66	<0.0005		
NCS AH21315	High Alloy steel			0.01				0.056					0.075			

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Als	Alt	
NCS AH 28302	Stainless steel	0.322	0.613	0.83	0.018	0.017	8.63	0.148	0.016	0.014	0.023	0.027	Φ40×35
NCS AH 28303	Stainless steel	0.329	0.397	0.433	0.018	0.027	11.95	2.66	0.026	0.016	0.0019	0.0073	Φ40×35
NCS AH 28304	Stainless steel	0.193	0.905	0.49	0.022	0.01	19.4	6.48	0.021	0.029	0.034	0.037	Φ40×35
NCS AH 28305	Heat resisting alloy	0.392	2.41	0.508	0.019	0.022	10.09	0.247	1.09	0.015	0.0031	0.0057	Φ40×35
NCS AH 28308	Heat resisting alloy	0.182	0.865	0.37	0.019	0.025	17.3	1.33	0.023	0.021	0.0025	0.0061	Φ40×35
NCS AH 28309	Heat resisting alloy	0.178	0.542	2.37	0.023	0.0084	22.71	16.2	0.0071	0.031	0.045	0.053	Φ40×35
NCS AH 28320	38CrMoAl	0.436	0.207	0.495	0.016	0.026	1.51	0.127	0.182	0.0037	1.06	1.1	Φ40×35
NCS AH 28321	38CrMoAl	0.411	0.357	0.502	0.014	0.0013	1.52	0.118	0.112	0.0051	0.557	0.56	Φ40×35
NCS AH 28322	60Si ₂ W	0.582	1.72	1.03	0.024	0.02	0.301	0.304	0.017	0.0037	0.011	0.012	Φ40×35
NCS AH 28323	60Si ₂ W	0.615	1.99	0.868	0.025	0.036	0.095	0.119	0.019	0.0022	0.017	0.02	Φ40×35
NCS AH 28324	4Cr10NiCuTi	0.37	0.862	0.889	0.018	0.016	10.83	0.17	0.015	0.017	0.014	0.02	Φ40×35
NCS AH 28325	1Cr13	0.151	0.572	0.681	0.02	0.035	11.55	0.398	0.017	0.015	0.0048	0.015	Φ40×35
NCS AH 28326	2Cr13	0.207	0.472	0.594	0.02	0.026	14.27	0.867	0.026	0.021	0.0017	0.0064	Φ40×35
NCS AH 28327	Cr18	0.433	0.693	0.933	0.019	0.014	18.52	0.176	0.013	0.028	0.011	0.015	Φ40×35
NCS AH 28328	Cr21Ni5Ti	0.129	0.97	0.599	0.048	0.012	22.53	6.01	0.013	0.037	0.144	0.148	Φ40×35
NCS AH 28329	Cr23Ni18	0.124	1.19	0.934	0.021	0.017	22.23	18.25	0.0023	0.035	0.053	0.062	Φ40×35
		Cu	Co	W	Ti	As	B	Sn	Sb	Zn			
NCS AH 28302	Stainless steel	0.47	0.019	0.004	0.076	0.0054	0.0002	0.0037	0.0018	0.0034			
NCS AH 28303	Stainless steel	0.08	0.057	0.0031	0.029	0.0049		0.0049	0.0016	0.0018			
NCS AH 28304	Stainless steel	0.079	0.095	0.0052	0.206	0.0046		0.0028	0.0015	0.0016			
NCS AH 28305	Heat resisting alloy	0.093	0.019	0.0065	0.0032	0.0054		0.0047	0.0021	0.0009			
NCS AH 28308	Heat resisting alloy	0.074	0.051	0.0032	0.0011	0.0051		0.004	0.0016	0.002			
NCS AH 28309	Heat resisting alloy	0.058	0.186	0.0034	0.051	0.0038		0.0023	0.0006	0.0036			
NCS AH 28320	38CrMoAl	0.096	0.0085	0.0069	0.0023								
NCS AH 28321	38CrMoAl	0.118	0.0084	0.005	0.0066								
NCS AH 28322	60Si ₂ W	0.091	0.0091	1.37	0.0037								
NCS AH 28323	60Si ₂ W	0.098	0.0056	0.682	0.0063								
NCS AH 28324	4Cr10NiCuTi	0.275	0.022	0.0053	0.06								
NCS AH 28325	1Cr13	0.078	0.034	0.0049	0.036								
NCS AH 28326	2Cr13	0.077	0.039	0.0044	0.01								
NCS AH 28327	Cr18	0.095	0.034	0.0052	0.043								
NCS AH 28328	Cr21Ni5Ti	0.106	0.089	0.011	0.853								
NCS AH 28329	Cr23Ni18	0.021	0.206	0.003	0.011								

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	As		
NCS AH 28330	15CrMo	0.164	0.222	0.540	0.011	0.0028	0.98	0.045	0.040	0.472	0.0067	0.0023	0.020	0.0078	Φ40×40	
NCS AH 28331	Steel	0.062	0.849	1.49	0.011	0.011	0.012	0.0040	0.0098	0.001	0.0012	0.0019	0.002	0.0058	Φ40×40	
NCS AH 28332	Steel	0.254	0.293	0.305	0.012	0.0020	0.93	0.183	0.016	0.205	0.040	0.030	0.033	0.0043	Φ40×40	
NCS AH 28333	Q460	0.164	0.323	1.44	0.019	0.0091	0.016	0.012	0.015	0.0017	0.019	0.019	0.033	0.0067	Φ40×40	
NCS AH 28334	Q345	0.158	0.309	1.45	0.017	0.0033	0.035	0.019	0.022	0.0085	0.030	0.018	0.035	0.0073	Φ40×40	
NCS AH 28335	Q550	0.170	0.221	1.34	0.019	0.0079	0.224	0.013	0.016	0.0067	0.0025	0.020	0.025	0.0075	Φ40×40	
NCS AH 28336	Q690	0.164	0.174	1.04	0.013	0.0067	0.194	0.014	0.017	0.108	0.0023	0.016	0.023	0.0076	Φ40×40	
NCS AH 28337	20MnSiV	0.250	0.435	1.31	0.022	0.015	0.013	0.0064	0.014	0.001	0.047	0.0017	0.002	0.010	Φ40×40	
			Nb	Sn	B	Co										
	NCS AH 28333	Q460	0.018		0.0003											
	NCS AH 28334	Q345	0.036		0.0008											
	NCS AH 28335	Q550			0.0020											
NCS AH 28336	Q690			0.0014												
NCS AH 28337	20MnSiV		0.0007		0.0044											
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	As	Unit Size (mm)	
NCS AH28338	Q235(15#)	0.129	0.254	0.468	0.030	0.035	0.063	0.050	0.153	0.011	0.002	0.0016	0.003	0.0082	Φ40×40	
NCS AH28339	45#	0.453	0.272	0.604	0.022	0.016	0.044	0.039	0.141	0.0066	0.002	0.0012	0.005	0.0060	Φ40×40	
NCS AH28340	20CrMo	0.204	0.226	0.503	0.020	0.019	0.909	0.050	0.181	0.192	0.003	0.0011	0.014	0.0080	Φ40×40	
NCS AH28341	15Mn	0.166	0.216	0.815	0.012	0.0048	0.065	0.0089	0.013	0.0011	0.002	0.014	0.028	0.0028	Φ40×40	
NCS AH28342	20Mn	0.182	0.208	0.801	0.012	0.0064	0.033	0.0085	0.012	0.0014	0.002	0.0019	0.017	0.0018	Φ40×40	
NCS AH28343	65Mn	0.620	0.288	0.942	0.024	0.027	0.074	0.036	0.123	0.0064	0.003	0.0021	0.004	0.0067	Φ40×40	
NCS AH28344	M20Mn	0.195	0.272	1.18	0.015	0.015	0.083	0.132	0.222	0.017	0.001	0.024	0.042	0.0088	Φ40×40	
NCS AH28345	30CrMnTi	0.266	0.317	0.929	0.013	0.014	1.13	0.082	0.148	0.011	0.004	0.071	0.020	0.0073	Φ40×40	
NCS AH28346	60Si2Mn	0.574	1.76	0.792	0.020	0.014	0.024	0.019	0.011							Φ40×40
NCS AH28347	ER50-6	0.076	0.90	1.49	0.020	0.011	0.024	0.0059	0.0076							Φ40×40
NCS AH28348	SAE1215	0.065	0.013	1.31	0.056	0.364	0.023	0.0082	0.010							Φ40×40
		Co														
NCS AH28338	Q235(15#)	0.011														
NCS AH28339	45#	0.011														
NCS AH28340	20CrMo	0.013														
NCS AH28341	15Mn	0.0048														
NCS AH28342	20Mn	0.0040														
NCS AH28343	65Mn	0.011														
NCS AH28344	M20Mn	0.011														
NCS AH28345	30CrMnTi	0.012														
Number	Name	C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	B	Nb		Unit Size (mm)	
NCS AH 93303	Low Alloy Steel	0.120	0.014	0.258	0.013	0.120	0.022	0.034		0.122						Φ35×50
NCS AH 93304	Low Alloy Steel	0.172	0.060	0.400	0.018	0.143	0.033	0.041		0.110						Φ35×50
NCS AH 93305	Low Alloy Steel	0.251	0.022	0.518	0.023	0.280	0.041	0.042		0.110						Φ35×50
NCS AH 93306	Low Alloy Steel	0.310	0.031	0.870	0.051	0.480	0.280	0.120		0.355						Φ35×50
NCS AH 93307	Low Alloy Steel	0.458	0.017	0.582	0.022	0.188	0.036	0.042		0.132						Φ35×50
NCS AH 93308	Low Alloy Steel	0.512	0.010	0.690	0.022	0.352	0.077	0.060		0.154						Φ35×50
NCS AH 93309	Low Alloy Steel	0.375	0.047	1.84	0.053	0.770	0.290	0.290		0.225						Φ35×50
NCS AH 93310	Low Alloy Steel	0.182	0.036	1.23	0.028	0.460	0.045	0.040		0.128						Φ35×50
NCS AH 93323	Line Pipe Steel	0.042	0.0028	1.582	0.0078	0.187	0.04	0.175	0.272	0.172	0.04	0.00019	0.03		Φ35×50	
		Ti Al Ca														
NCS AH 93323	Low Alloy Steel	0.024	0.03	0.00034												

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	Al	
NCS AH37301	High Manganese Steel	1.24	0.314	12.47	0.061	0.021	1.91	1.11	0.500	0.023	0.162	0.014	0.301		Φ36×36
NCS AH37302	High Manganese Steel	1.28	0.508	13.77	0.057	0.0056	2.42	2.09	1.00	0.041	0.049	0.056	0.004		Φ36×36
NCS AH37303	High Manganese Steel	1.20	0.351	24.20	0.060	0.0031	1.86	1.65	1.01	0.037	0.049	0.066	0.040		Φ36×36
NCS AH37304	High Manganese Steel	1.05	0.70	12.07	0.037	0.016	1.72	0.026			0.014				Φ36×36
NCS AH37305	High Manganese Steel	0.532	0.091	3.76	0.018	0.008	0.459	0.091	0.397		0.030	0.008	0.140	0.004*	Φ34×34
NCS AH37306	High Manganese Steel	0.734	0.254	6.02	0.019	0.012	0.941	0.582	0.735		0.088	0.027	0.313	0.010*	Φ34×34
NCS AH37307	High Manganese Steel	0.780	0.609	9.84	0.028	0.021	1.56	1.62	1.08		0.232	0.092	0.494	0.019*	Φ34×34
NCS AH37308	High Manganese Steel	1.07	0.733	13.97	0.055	0.016	1.89	2.43	1.39		0.311	0.124	0.762	0.023*	Φ34×34
NCS AH37309	High Manganese Steel	1.25	0.949	17.76	0.075	0.027	2.17	3.17	1.69		0.294	0.182	1.05	0.020*	Φ34×34
NCS AH37310	High Manganese Steel	1.10	0.67	22.39	0.020	0.004	1.23	1.69	0.58		0.082	0.088	0.49	0.023*	Φ36×36
NCS AH37311	High Manganese Steel	1.13	0.69	17.93	0.020	0.008	1.45	1.68	0.58		0.108	0.101	0.53	0.019*	Φ36×36
NCS AH37312	High Manganese Steel	1.12	0.70	13.20	0.026	0.007	1.76	1.59	0.70		0.107	0.127	0.65	0.026*	Φ36×36
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	W	Co	N	
NCS AH37313	Stainless Steel	0.098	0.100	8.54	0.035	0.008	17.27	3.88		0.272			0.114	0.076	Φ36×36
NCS AH37314	Stainless Steel	0.132	0.77	8.44	0.044	0.016	16.78	5.42		1.115			0.150	0.101	Φ36×36
NCS AH37315	Stainless Steel	0.138	0.47	0.97	0.028	0.018	16.20	6.19		0.189			0.093	0.128	Φ36×36
NCS AH37316	Stainless Steel	0.081	0.72	1.45	0.029	0.013	18.29	8.03		0.093			0.139	0.069	Φ36×36
NCS AH37317	Stainless Steel	0.106	0.41	1.72	0.027	0.024	24.37	19.13		0.100			0.114	0.078	Φ36×36
NCS AH37318	Stainless Steel	0.538	0.202	8.49	0.018	0.0063	20.31	3.50	0.056	0.033	0.067	0.034	0.034	0.463	Φ36×36
NCS AH37319	Stainless Steel	0.036	0.363	0.807	0.043	0.0096	16.19	10.27	2.02	0.479	0.062	0.054	0.159	0.054	Φ36×36
NCS AH37320	Stainless Steel	0.017	0.290	1.04	0.048	0.031	16.06	10.07	2.01	0.630	0.071	0.040	0.207	0.040	Φ36×36
NCS AH37321	Stainless Steel	0.020	0.338	1.10	0.068	0.049	15.93	10.11	2.03	0.367	0.059	0.089	0.722	0.028	Φ36×36
Nb															
NCS AH37318	Stainless Steel	0.066													
NCS AH37319	Stainless Steel	0.011													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	Al	
NCS AH37322	316L	0.032	0.78	1.45	0.026	0.019	16.14	10.30	2.28	0.026					Φ36×36
NCS AH37323	304	0.075	0.77	1.44	0.033	0.025	18.56	8.49	0.089	0.225					Φ36×36
NCS AH37324	OCr18Ni10Ti	0.086	0.84	1.45	0.032	0.014	17.45	9.26	0.040	0.16		0.56			Φ36×36
NCS AH37325	1Cr18Ni9Ti	0.134	1.06	1.51	0.033	0.021	17.01	8.56	0.062	0.16		0.61			Φ36×36
NCS AH37326	1Cr13	0.144	0.56	0.71	0.038	0.028	12.07	0.184		0.207					Φ36×36
NCS AH37327	2Cr13	0.232	0.82	0.80	0.042	0.027	12.42	0.68	0.073	0.12					Φ36×36
NCS AH37328	High Manganese Steel	0.78	0.60	9.84	0.028	0.016	1.56	1.62	1.08		0.232	0.092	0.49	0.019*	Φ36×36
NCS AH37329	High Manganese Steel	1.25	0.95	17.76	0.076	0.015	2.17	3.17	1.69		0.294	0.182	1.05	0.020*	Φ36×36
Co															
NCS AH37322	316L	0.039													
NCS AH37323	304	0.17													
NCS AH37324	OCr18Ni10Ti	0.17													
NCS AH37325	1Cr18Ni9Ti	0.16													
NCS AH37326	1Cr13	0.017													
NCS AH37327	2Cr13	0.030													

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	Nb	
NCS AH 11117	Low alloy steel	0.409	1.69	0.74	0.0039	0.0005	0.855	1.81	0.41	0.073	0.015	0.0034	(0.0003)	38×40
NCS AH11118	Alloy structure steel	0.164	0.261	(0.38)	0.0066	0.0019	1.09	4.17	0.261	0.0017	0.037	0.007	(0.0003)	38×40
NCS AH11119	Carbon structure steel	0.182	0.112	0.353	0.016	0.0055	0.023	0.0059		(0.0018)	0.013			36×40
NCS AH11120	Alloy Structure steel	0.472	0.344	0.623	0.018	0.002	1.01	1.61	0.256	0.163	0.107			37×40
NCS AH11121	Alloy structure steel	0.187	0.086	1.3	0.009	0.023	1.27	0.204	0.097	0.0047	0.041	0.0058		37×40
NCS AH11122	Alloy structure steel	0.194	0.244	0.594	0.0082	0.0016	0.93	0.05	0.167	0.0048	0.107	0.0079		37×40
NCS AH 11123	Alloy structure steel	0.222	0.736	1.63	0.018	0.02	0.052	0.045	0.012	0.126	0.025	0.0016	0.043	37×40
NCS AH 11124	Alloy structure steel	0.181	0.501	0.496	0.0099	0.0017	0.988	0.028	0.79	0.548	0.02		0.143	38×35
NCS AH 11125	Alloy structure steel	0.446	0.242	0.745	0.011	0.0063	0.169	0.072	0.216	0.0014	0.112	0.016		38×35
NCS AH 11126	Alloy structure steel	0.39	0.244	0.747	0.01	0.0072	0.772	1.702	0.215	0.0043	0.013	0.024		38×35
NCS AH 11127	Bearing steel	0.993	0.55	1.09	0.016	0.0011	1.49	0.023	0.0024	0.0046	0.086	0.016		37×40
NCS AH 11128	Gear steel	0.186	0.243	0.97	0.012	0.0016	1.17	0.016	0.0059	0.0047	0.03	0.0046		38×40
NCS AH 11129	Gear steel	0.206	0.248	0.85	0.012	0.026	0.5	0.51	0.205	0.0025	0.021	0.0031		38×40
NCS AH 11130	Alloy steel	0.11	0.342	1.43	0.016	0.011	0.059	0.017	0.033	0.016	0.025	0.011	0.057	37×40
NCS AH 11131	Stainless steel	0.05	0.484	1.12	0.033	0.0019	17.93	9.66	0.245	0.099	0.165	0.152	0.466	37×35
NCS AH11132	Alloy steel	0.093	0.288	0.469	0.016	0.0013	8.79	0.064	0.94	0.198	0.058	0.013	0.066	37×40
NCS AH11132a	Alloy steel	0.095	0.349	0.488	0.011	0.0023	8.72	0.067	0.95	0.209	0.021	0.014	0.075	37×40
NCS AH11132b	Alloy steel	0.095	0.279	0.457	0.012	0.0029	8.75	0.133	0.95	0.212	0.039	0.014	0.069	37×40
NCS AH11133	Pipeline steel	0.109	0.229	0.547	0.012	0.0019	8.73	0.317	0.407	0.192	0.049	0.015	0.055	37×35
NCS AH11133a	Pipeline steel	0.131	0.247	0.541	0.011	0.0028	8.7	0.313	0.411	0.194	0.045	0.024	0.052	37×35
NCS AH11134	Alloy steel	0.101	0.65	0.424	0.01	0.0031	1.21	0.037	0.488	0.007	0.017	0.0058		37×40
NCS AH11134a	Alloy steel	0.101	0.625	0.447	0.01	0.0021	1.17	0.052	0.483	0.0074	0.03	0.007		37×40
		Als	Alt	Sn	B	As	Ti	Ca	W	N	Pb	Sb	Bi	
NCS AH 11117	Low alloy steel	0.0054	0.006	0.001	(0.0003)	0.0042	0.0016							
NCS AH11118	Alloy structure steel	0.038	0.039	0.0032	0.0005	0.0066	0.001		0.0023					
NCS AH11119	Carbon structure steel	0.035	0.038					0.0025		0.0035				
NCS AH11120	Alloy Structure steel								0.107	0.0084				
NCS AH11121	Alloy structure steel	0.027	0.028	0.0031		0.0037	0.0011			0.017				
NCS AH11122	Alloy structure steel	0.021	0.021	0.012		0.0075	0.0024			0.0057				
NCS AH 11123	Alloy structure steel	0.027	0.031	0.0085	0.0041	0.0096	0.0016	0.0002*		0.0099	0.0005	0.0048	<0.0001#	
NCS AH 11124	Alloy structure steel	0.027	0.027	0.0011	0.0027	0.0046								
NCS AH 11125	Alloy structure steel	0.013	0.015	0.0061	0.0004	0.0073	0.0014		0.015					
NCS AH 11126	Alloy structure steel	0.018	0.019	0.0006	0.0004	0.0042	0.0041							
NCS AH 11127	Bearing steel	0.015	0.015	0.018	0.0004		0.0038				<0.0005#			
NCS AH 11128	Gear steel	0.019	0.021	0.0032		0.0044	0.066			0.005				
NCS AH 11129	Gear steel	0.026	0.027	0.0023		0.0039	0.0017			0.0067		(0.0006)		
NCS AH 11130	Alloy steel	0.012	0.019			0.0067	0.019	0.0005*	0.051	0.045				
NCS AH 11131	Stainless steel													
NCS AH11132	Alloy steel									0.038				
NCS AH11132a	Alloy steel		0.004							0.038				
NCS AH11132b	Alloy steel		0.005											
NCS AH11133	Pipeline steel	0.0028	0.0041	0.0074	0.0019	0.0055	0.0006*	0.0005	1.72	0.047	<0.0001#	0.0019	<0.0001#	
NCS AH11133a	Pipeline steel	0.0041	0.0053	0.0051	0.0023	0.0054	0.0008	0.0006	1.72	0.044	<0.0001#	0.0009*	<0.0001#	
NCS AH11134	Alloy steel		0.01											
NCS AH11134a	Alloy steel		0.011											

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(%)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	
NCS AH11134b	Alloy steel	0.102	0.668	0.475	0.0082	0.0015	1.18	0.038	0.5	0.0061	0.036	0.0056	37×40
NCS AH 11135	Alloy steel	0.113	0.223	0.503	0.011	0.0075	0.99	0.02	0.48	0.0057	0.045	0.007	37×40
NCS AH 11135a	Alloy steel	0.111	0.252	0.412	0.011	0.0036	0.94	0.08	0.48	0.0051	0.056	0.0099	37×40
NCS AH 11136	Alloy steel	0.103	0.286	0.455	0.011	0.0031	2.22	0.025	0.99	0.012	0.023	0.0083	37×40
NCS AH 11136a	Alloy steel	0.094	0.22	0.442	0.0094	0.0034	2.26	0.042	0.93	0.0069	0.11	0.01	37×40
NCS AH11137	Cast Iron	3.41	1.89	0.48	0.043	0.033	0.235	0.215	0.12	0.154	0.215	0.032	30×25
NCS AH11138	Cast Iron	3.74	2.48	0.271	0.049	0.019	0.216	0.141	0.17	0.178	0.427	0.0047	30×25
NCS AH11139	Low Silicon Pig Iron	4.22	0.057	0.108	0.068	0.029	0.044	0.019			0.0068		35×22
NCS AH11326c	Alloy Structure Steel	0.213	0.235	0.932	0.0079	0.0025	1.15	0.014		0.0045	0.011		38×40
NCS AH11326d	Alloy Steel	0.211	0.232	0.929	0.0083	0.0029	1.14	0.013		0.0045	0.01		37×40
NCS AH18304	Carbon Steel	0.669	0.273	0.571	0.012	0.015							37×30
NCS AH18305	Carbon Steel	0.094	0.229	0.55	0.015	0.018							37×30
NCS AH18306	Carbon Steel	0.196	0.223	0.465	0.014	0.012							37×30
NCS AH18307	Carbon Steel	0.455	0.22	0.582	0.021	0.01							37×30
		Als	Alt	Sn	B	As	Ti	W	N	Al			
NCS AH11134b	Alloy steel												
NCS AH 11135	Alloy steel		0.01										
NCS AH 11135a	Alloy steel												
NCS AH 11136	Alloy steel		0.007										
NCS AH 11136a	Alloy steel								0.0075				
NCS AH11137	Cast Iron	0.033	0.035	0.036	0.018	0.099	0.033	0.332					
NCS AH11138	Cast Iron	0.095	0.096	0.093	0.054	0.024	0.02	0.433					
NCS AH11139	Low Silicon Pig Iron						0.019			0.059			
NCS AH11326c	Alloy Structure Steel						0.07						
NCS AH11326d	Alloy Steel	0.016	0.017				0.069						
Number	Name	Chemical Composition(%)											Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	
NCS AH18310	Carbon Steel	0.689	0.279	0.581	0.008	0.015							37×30
NCS AH18312	Carbon Steel	0.558	0.218	0.665	0.019	0.0084							38×35
NCS AH37330	Structural alloy steel	0.245	1.26	1.27	0.026	0.016	0.276	0.084			0.022		38×38
NCS AH37331	Structural alloy steel	0.178	0.394	0.951	0.027	0.098	0.11	0.124			0.022		38×38
NCS AH37332	Stainless Steel	0.031	0.497	0.548	0.035	0.007	10.97	0.424	0.011	0.066	0.06	0.021	36×36
NCS AH37333	High Manganese Steel	1.23	0.428	12.46	0.061	0.009	1.72	3.34	0.951	0.085	0.017		36×36
NCS AH37334	High Manganese Steel	1.2	0.655	16.9	0.051	0.011	2.2	0.2	0.18	0.253	0.024		36×36
NCS AH37335	High Manganese Steel	1.3	0.457	18.7	0.048	0.007	2	0.593	0.249	0.201	0.021		36×36
		Nb	As	Ti	W	N	Al	Ce	La				
NCS AH18310	Carbon Steel												
NCS AH18312	Carbon Steel		0.019										
NCS AH37330	Structural alloy steel						(0.061)						
NCS AH37331	Structural alloy steel						(0.102)						
NCS AH37332	Stainless Steel			0.362		0.017							
NCS AH37333	High Manganese Steel	0.108		0.064		0.024	0.022	0.029	0.017				
NCS AH37334	High Manganese Steel	0.085		0.125	0.091	0.021	0.018	0.027	0.014				
NCS AH37335	High Manganese Steel	0.077		0.006	0.077	0.024	0.011*	0.011					

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)														Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	Alt	As	Sn	Mo	(mm)	
NCS AH11101	Carbon Steel	0.033	0.029	0.299	0.019	0.011	0.028	0.0053	0.021	0.046	0.048	0.0059	0.006	0.0014	Φ37×40	
NCS AH11102	Carbon Steel	0.213	0.075	0.77	0.013	0.0021	0.015	0.0056	0.017	0.044	0.045	0.016	0.0059	0.0009	Φ37×40	
NCS AH11103	Carbon Steel	0.189	0.055	0.76	0.018	0.0016	0.021	0.0057	0.015	0.039	0.04	0.011	0.0081	0.0009	Φ37×40	
NCS AH11104	Stainless steel	0.237	0.143	0.88	0.018	0.0027	11.55	0.725	0.048				0.0028	0.98	Φ37×40	
NCS AH11105	Mold steel	1.55	0.41	0.384	0.018	0.001	11.94	0.17	0.035				0.0016	0.846	Φ37×40	
NCS AH11106	Tool steel	0.811	0.285	0.365	0.022	0.0016	3.98	0.114	0.083					3.15	Φ37×40	
NCS AH11107	Tool steel	1.1	0.29	0.298	0.018	0.001	3.79	0.215	0.087					9.6	Φ37×40	
NCS AH11108	Low Alloy Steel	0.0023	0.0082	0.475	0.042	0.0047	0.018	0.0054	0.0077	0.038	0.038				Φ37×40	
NCS AH11109	Low Alloy Steel	0.087	1.17	1.96	0.014	0.0017	0.015	0.0055	0.0071	0.044	0.045				Φ37×40	
NCS AH11110	Heat resistant Steel	0.114	0.202	0.337	0.01	0.0017	8.81	0.161	0.112		0.0015	0.0071	0.0064	0.382	Φ37×40	
NCS AH11111	Gray Cast Iron	3.78	2.73	0.606	0.053	0.02	0.7	0.856	0.526				0.032	0.359	Φ31×30	
NCS AH11112	Gray Cast Iron	3.95	2.3	0.511	0.055	0.014	0.251	0.141	0.487				0.055	0.474	Φ31×30	
NCS AH11113	Silicon Steel	0.055	3.44	0.112	0.019	0.025	0.053	0.04	0.02	0.011	0.012		0.049	0.0033	Φ37×40	
NCS AH11114	Silicon Steel	0.068	2.71	0.1	0.023	0.003	0.324	0.341	0.013	0.0064	0.0073	0.003	0.056	0.0066	Φ37×40	
NCS AH11115	Alloy Steel	0.545	1.24	0.717	0.0076	0.017	0.703	0.102	0.0067			0.0026			Φ37×40	
NCS AH11116	Alloy Steel	0.145	0.144	1.46	0.011	0.0006	0.017	0.0068	0.012	1.5	1.5	0.0017	0.0015	0.0032	Φ37×40	
		B	Ca	V	W	Co	Ti	Nb	N	Sb	Als#	Zr#	Al	Mg	Bt	Bs
NCS AH11101	Carbon Steel	0.0002	0.0015													
NCS AH11102	Carbon Steel	0.0004	0.0021													
NCS AH11103	Carbon Steel	0.0003	0.0015													
NCS AH11104	Stainless steel			0.263	1.01	0.109										
NCS AH11105	Mold steel			0.819	0.088	0.034	0.0058	0.061								
NCS AH11106	Tool steel			1.55	8.73	0.136										
NCS AH11107	Tool steel			1.14	1.27	7.94										
NCS AH11108	Low Alloy Steel	0.0003	0.00013				0.0005	0.0092	0.0018							
NCS AH11109	Low Alloy Steel	0.00016	0.0004				0.0034	0.00015	0.0026							
NCS AH11110	Heat resistant Steel	0.0034		0.184	1.67	0.021	0.0004	0.048	0.047	0.0025	<0.001	<0.0005				
NCS AH11111	Gray Cast Iron			0.018			0.117			0.025			0.042	(0.034)		
NCS AH11112	Gray Cast Iron			0.312			0.117						0.014	0.032		
NCS AH11113	Silicon Steel			0.097			0.0033	0.072							0.0053	0.0034
NCS AH11114	Silicon Steel			0.0033			0.053	0.002								
NCS AH11115	Alloy Steel			0.0017			0.028									
NCS AH11116	Alloy Steel			0.0013			0.0037									
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	Als	Co	Unit Size	
															(mm)	
NCS AH11140	Stainless Steel	0.017	0.394	0.66	0.035	0.0014	16.31	11.11	0.281	2.1	0.065	0.016		0.132	D37×35	
NCS AH11141	9Mn2V	0.87	0.23	1.8	0.013	0.011	0.085	0.037	0.094	0.013	0.15	0.018	0.017	0.011	D37×35	
NCS AH11142	Alloy structure steel	0.152	0.234	1.15	0.0075	0.0043	0.054	0.025	0.06	0.022	0.054	0.017			ø38×40	
NCS AH11143D	Steel	0.249	0.343	1.38	0.026	0.025	0.03	0.009	0.031		0.028			0.0032	ø38×40	
NCS AH11143E	Steel	0.204	0.294	1.28	0.02	0.032	0.03	0.011	0.029		0.031			0.0034	ø38×40	
NCS AH11144	Q460D	0.135	0.266	1.32	0.0094	0.0012	0.082	0.019	0.015	0.0037	0.042	0.037	0.035	0.0029	ø38×35	
NCS AH11145	16MnCr5	0.156	0.188	1.15	0.013	0.024	1.05	0.054	0.05	0.017	0.0063	0.04	0.038	0.01	ø38×35	
NCS AH11146	34CrNi3Mo	0.381	0.276	0.698	0.0084	0.0025	0.98	3.06	0.045	0.298	0.0063	0.0045	0.003	0.0064	ø38×35	
		Ti	W	Sn	As	N	B									
NCS AH11140	Stainless Steel	0.223														
NCS AH11141	9Mn2V		0.011													
NCS AH11142	Alloy structure steel															
NCS AH11143D	Steel			0.0047	0.0067	0.013										
NCS AH11143E	Steel			0.0036	0.0048	0.0095										
NCS AH11144	Q460D						0.0003									
NCS AH11145	16MnCr5			0.013	0.0053											
NCS AH11146	34CrNi3Mo			0.0032												

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(%)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Co	Als	Alt	
NCSAH11147	H08Mn2Si	0.175	1.39	2.14	0.0013	0.0009	0.0079	0.0061	0.0026	(0.0004)	0.0047	0.0021	0.031	0.032	ø38×35
NCSAH11148	20Mn	0.185	0.435	0.852	0.012	0.0078	0.276	0.264	0.172	0.193	0.194	0.0066	0.195	0.203	ø38×35
NCSAH11149	25CrMnMo	0.285	0.227	1.4	0.02	0.0035	0.46	0.024	0.051	0.0038	0.06	0.006	0.019	0.02	ø38×35
NCSAH11150	14MnVNb	0.15	0.31	1.22	0.013	0.0043	0.092	0.022	0.021	0.067	0.069		0.037	0.039	ø38×35
NCSAH11151	09MnNb	0.1	0.335	1.23	0.01	0.0022	0.057	0.027	0.01		0.07		0.027	0.028	ø38×35
NCSAH11152	28MnCr	0.271	0.27	1.45	0.011	0.0065	0.271	0.026	0.01		0.057		0.021	0.022	ø38×35
NCSAH11153	29Mn5	0.284	0.264	1.46	0.013	0.0046	0.074	0.021	0.011		0.054		0.011	0.012	ø38×35
NCSAH11154	20Cr3Mo3S	0.174	0.261	0.556	0.0092	0.0014	3.07	0.031	0.315	0.012	0.05	0.011	0.02	0.021	ø38×35
NCSAH11155	22CrMo8V	0.225	0.244	0.452	0.0081	0.0029	0.961	0.025	0.796	0.145	0.063		0.017	0.019	ø38×35
NCSAH11156	26CrMo7S	0.245	0.22	0.465	0.01	0.0018	0.563	0.026	0.77	0.083	0.05		0.023	0.025	ø38×35
NCSAH11157	45Mn2	0.461	0.207	1.58	0.014	0.0098	0.077	0.025	0.013	0.0018	0.069	0.0061			ø38×35
NCSAH11158	20Cr1MoVTiB	0.176	0.537	0.498	0.015	0.0015	1.13	0.143	0.79	0.541	0.11	0.03	0.016	0.019	ø38×35
NCSAH11159	15Cr	0.199	0.272	0.659	0.022	0.0057	0.845	0.035	0.0074	0.0043	0.132	0.019	0.0077	0.011	ø38×35
NCSAH11160	45Cr	0.439	0.357	0.637	0.0069	0.0012	1.25	0.019			0.012	0.0036	0.011	0.011	ø38×35
		As	Sn	B	Ti	La	Ce	Bi	N	Nb	Ca	Pb	W		
NCSAH11147	H08Mn2Si		0.0013	0.0006											
NCSAH11148	20Mn	0.016	0.0076		0.246	0.0091	0.0095								
NCSAH11149	25CrMnMo	0.0087		0.0011	0.0025				0.0067						
NCSAH11150	14MnVNb	0.0074	0.0037		0.014					0.043					
NCSAH11151	09MnNb	0.0077	0.0042		0.011			<0.0005*			0.002				
NCSAH11152	28MnCr	0.0078	0.0039	0.0011				<0.0005*							
NCSAH11153	29Mn5	0.0077	0.0035	0.0011	0.02										
NCSAH11154	20Cr3Mo3S	0.009	0.003	0.0014	0.01										
NCSAH11155	22CrMo8V	0.0079	0.0045										0.0002*		
NCSAH11156	26CrMo7S	0.0081								0.03			0.0002*		
NCSAH11157	45Mn2	0.0082	0.0043		0.0027						0.0013				
NCSAH11158	20Cr1MoVTiB	0.0054		0.0033	0.173									0.0074	
NCSAH11159	15Cr	0.0052		(0.0002)	0.031										
NCSAH11160	45Cr			(0.0005)	0.0025										
Number	Name	Chemical Composition(%)													Unit Size (mm)
NCSAH11161	34CrNiMo	0.323	0.176	0.522	0.012	0.0053	1.59	1.56	0.226	0.036	0.086	0.023	0.0052	0.011	ø38×35
NCSAH11162	15NiCuMoNb	0.125	0.287	0.95	0.012	0.0046	0.19	1.11	0.27	0.0018	0.58	0.0062	0.034	0.035	ø38×35
NCSAH11163	12Cr1MoV	0.103	0.228	0.528	0.01	0.0051	1.07	0.015	0.274	0.182	0.007	0.0031		0.0075	ø38×35
NCSAH11164	Q355	0.185	0.455	1.37	0.012	0.0032	0.034	0.016	0.0022	0.0013	0.013	0.0032		0.023	ø38×35
NCSAH11165	60Si2CrV	0.581	1.55	0.61	0.01	0.0033	1.03	0.014	0.0073	0.151	0.02	0.0039		0.009	ø38×35
NCSAH11166	40CrMnMo	0.372	0.227	0.964	0.015	0.0032	1.03	0.014	0.231	0.006	0.017	0.0033		0.038	ø38×35
NCSAH11167	45MnMo	0.44	0.263	0.759	0.0093	0.0065	0.097	0.061	0.217	0.0013	0.099	0.0072		0.017	ø38×35
NCSAH11168	42CrMo	0.405	0.22	0.635	0.012	0.006	1.06	0.019	0.19	0.007	0.014	0.0034		0.014	ø38×35
NCSAH11169	GCr15	0.955	0.265	0.352	0.017	0.0014	1.46	0.013	0.0037	0.0035	0.055	0.0021		0.014	ø38×35
NCSAH11170	35CrMo	0.355	0.237	0.546	0.012	0.004	0.942	0.0091	0.171	0.0062	0.011	0.0029		0.029	ø38×35
Number	Name	As	Ti	W	Nb	Sn	Zn	B	N	Ca	Sb	Pb	W		
NCSAH11161	34CrNiMo	0.01	0.0051	0.018	0.0032	0.0086	0.012	0.0009							
NCSAH11162	15NiCuMoNb	0.01	0.0025		0.022				0.0063	0.0031					
NCSAH11163	12Cr1MoV	0.0049	0.0022												
NCSAH11164	Q355	0.004	0.015			0.001				0.0018					
NCSAH11165	60Si2CrV	0.0045	0.014	0.0082							0.0012				
NCSAH11166	40CrMnMo	0.002													
NCSAH11167	45MnMo	0.005	0.0015					0.0004		0.001					
NCSAH11168	42CrMo	0.0043	0.005												
NCSAH11169	GCr15	0.0025	0.0025												
NCSAH11170	35CrMo	0.0036	0.017												

Section 11 Set-up Sample 1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(%)												Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	As	Als	
NCS AH11171	40Cr	0.4	0.247	0.66	0.016	0.0045	0.925	0.011	0.01	0.0019	0.0065	0.002		ø38×35
NCS AH11172	22MnB5	0.224	0.251	1.3	0.013	0.0006*	0.172	0.0045*	0.0061		0.0019	0.0018	0.049	Φ37×40
NCS AH11173	DP980	0.111	0.347	2.41	0.01	0.0014	0.474	0.0083	0.013	0.205	0.0041	0.0027	0.045	Φ37×40
NCS AH11174	Silicon Steel	0.0053	1.17	0.87	0.059	0.0021	0.021	0.011	0.0041			0.0066		Φ37×40
NCS AH11175	25Mn	0.237	0.215	0.87	0.0097	0.0056	0.055	0.031	0.077	0.015		0.0073		Φ38×40
NCS AH20321	Stainless Steel	0.058	0.516	1.17	0.029	0.015	17.94	8.08	0.24	0.204	0.069		0.03	Φ38×40
NCS AH21316	Stainless Steel	0.015	0.304	1.27	0.028	0.0033	16.01	10.11	0.175	2.18	0.1	0.0036		Φ38×35
		Alt	Ti	N	Co	Sn	Pb	Bi	Sb	Ca	B	Bt		
NCS AH11171	40Cr								0.0012					
NCS AH11172	22MnB5	0.051	0.032		0.0024	0.0004*	<0.0001#	<0.0001#	0.0003*	0.0015	0.003			
NCS AH11173	DP980	0.048	0.025	0.0052	0.0032	0.0052	<0.0001#							
NCS AH11174	Silicon Steel	0.373				0.0087								
NCS AH11175	25Mn					0.0042								
NCS AH20321	Stainless Steel	0.032		0.062	0.083					0.0014		0.0047		
NCS AH21316	Stainless Steel			0.028	0.209	0.012								
Number	Name	C	Si	Mn	P	Chemical Composition(%)								Unit Size (mm)
		S	Cr	Ni	Cu	Mo	V	Ti	W					
NCS AH37337	High Chromium Cast Iron	2.95	0.97	0.719	0.077	0.024	13.89	0.806	0.448	0.683	0.135	0.035	0.172	Φ32×30
NCS AH37338	Free Cutting Steel	0.099	0.074	0.945	0.057	0.275	0.022	0.013	0.009					Φ36×36
NCS AH37339	Free Cutting Steel	0.143	0.102	1.04	0.062	0.321	0.025	0.016	0.011					Φ36×36
NCS AH37340	Free Cutting Steel	0.102	0.086	0.956	0.06	0.443	0.015	0.01	0.01					Φ36×36
NCS AH37341	Structural alloy steel	0.405	0.335	0.644	0.025	0.016	0.79	1.46	0.024	0.196				Φ36×36
NCS AH37342	Structural alloy steel	0.23	0.285	0.569	0.02	0.011	0.612	1.84	0.013	0.183				Φ36×36
NCS AH37343	Structural alloy steel	0.209	0.358	0.761	0.022	0.011	1.66	1.71	0.014	0.281				Φ36×36
NCS AH37344	High Chromium Cast Iron	3.95	0.569	1.26	0.018	0.051	33.42	0.098	0.005	0.029	0.17	0.02		Φ32×30
NCS AH37345	High Chromium Cast Iron	2.69	0.261	0.307	0.008	0.017	36.21	0.029	0.004	0.031	0.06			Φ32×30
NCS AH41318	Stainless Steel	0.015	0.39	0.43	0.031	0.015	17.2	0.13	0.077	0.84	0.082			Φ38×32
		Nb	Sn	Co	As	Pb	Al*	Al	As	N				
NCS AH37337	High Chromium Cast Iron	0.025	0.048	0.024	0.003									
NCS AH37338	Free Cutting Steel					0.183	0.088		0.009					
NCS AH37339	Free Cutting Steel					0.219	0.089		0.011					
NCS AH37340	Free Cutting Steel					0.108	0.103		0.012					
NCS AH37341	Structural alloy steel							(0.063)						
NCS AH37342	Structural alloy steel							(0.061)						
NCS AH37343	Structural alloy steel							(0.083)						
NCS AH37344	High Chromium Cast Iron			0.037										
NCS AH37345	High Chromium Cast Iron			0.009										
NCS AH41318	Stainless Steel	0.16		0.026						0.025				
Number	Name	C	Si	Mn	P	Chemical Composition(%)								Unit Size (mm)
		S	Cr	Ni	Cu	Als	Alt	Sn	As					
NCS AH 93334b	Alloy structural steel	0.38	0.298	0.638	0.012	0.0068	0.992	0.012	0.0052	0.064	0.068	0.16	0.159	38×40
NCS AH93335	Low alloy steel	0.213	0.628	1.49	0.019	0.013	0.14	0.122	0.129					ø38×35
		Sb	Bi	Pb	V									
NCS AH 93334b	Alloy structural steel	0.013	0.017	0.046										
NCS AH93335	Low alloy steel				0.128									

Section 11 Set-up Sample

2) Nonferrous Metal

Number	Name	Chemical Composition(percent)											Unit Size (mm)		
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	Zr	B	V			
NCS AH 49302	Aluminum Alloy	0.495	0.029	0.487	0.769	11.30	0.253								Φ62×30
NCS AH 49303	Aluminum Alloy	3.42	0.169	0.314	0.872	8.27	0.906								Φ62×30
NCS AH 49304	Aluminum Alloy	0.227	1.45	0.066	0.678	10.24	0.170								Φ62×30
NCS AH 49305	Aluminum Alloy	3.87	1.77	0.680	0.419	0.314	0.272	0.078	0.036						Φ62×30
NCS AH 49306	Aluminum Alloy	4.81	0.036	0.718	0.237	0.233	0.161	0.230							Φ62×30
NCS AH 49307	Aluminum Alloy	3.99			0.204	7.18				0.149					Φ62×30
NCS AH 49308	Aluminum Alloy	6.01	0.0171		0.213	0.091	0.020	0.107			0.083	0.157			Φ62×30
Number	Name	Chemical Composition(percent)											Unit Size (mm)		
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	Cr	Zr	Pb		Sn	V
NCS AH49322	Aluminum Alloy	0.314	0.111	0.337	0.737	12.31	0.099	0.102	0.062		0.052	0.05	0.021		D45×35
NCS AH49323	Aluminum Alloy	3.34	0.19	0.366	0.93	8.98	0.842	0.144	0.284	0.05		0.055	0.158		D45×35
NCS AH37501	Aluminum Alloy	1.44	2.34	0.019	0.16	0.05	5.44	0.02	(0.003)	0.216		(0.001)		0.011	50×40
		Ga													
NCS AH37501	Aluminum Alloy	0.018													
Number	Name	Chemical Composition(percent)											Unit Size (mm)		
		Cu	Al	Fe	Mn	Sn	Pb	Ni	Si	Sb	P	Zn		Ag	Bi
NCS AH45301	Aluminum Brass	66.59	6.82	2.8	2.26	0.25	0.47	0.5	0.11	0.028	0.023	remain			Φ40×35
Number	Name	Chemical Composition(%)											Unit Size (mm)		
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	As	Ca	Ce		Co	Ga
NCS AH43943	Aluminum Alloy	1.16	0.184	0.605	0.77	0.115	0.041	0.106	0.0038	0.014	0.281	0.418	0.277	0.114	62x30
		Hg	Sn	V	Zr										
NCS AH43943	Aluminum Alloy	0.052	5.94	0.151	0.271										
Number	Name	Chemical Composition(%)													Unit Size (mm)
		Si	Fe	Cu	Mn	Ni	Zn	Ce	Zr						
NCS AH49309	Magnesium Alloy		0.0027	0.0092	0.15	0.001	5.59	0.149							45×30
NCS AH49310	Magnesium Alloy	0.0056*	0.0033	0.054	0.093	0.0009	4.58	0.826							45×30
NCS AH49311	Magnesium Alloy	0.0047*	0.0041	0.068	0.067	0.0011	3.63	1.28							45×30
NCS AH49312	Magnesium Alloy			0.051	0.062	0.084	2.69	1.47							45×30
NCS AH49313	Magnesium Alloy			0.133	0.214	0.005	1.46	1.54							45×30
NCS AH49314	Magnesium Alloy						4.36	2.79	1.03*						45×30
NCS AH49315	Magnesium Alloy						3.52	4.16	0.63						45×30
NCS AH49316	Magnesium Alloy						4.37	3.37	0.81						45×30
NCS AH49317	Magnesium Alloy						4.71		0.17						45×30
NCS AH49318	Magnesium Alloy	0.0015					6.15		0.197						45×30
NCS AH49319	Magnesium Alloy					0.025	6.08		0.36						45×30
Number	Name	Chemical Composition(%)											Unit Size (mm)		
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb	Sn		Zr	Sr
NCS AH49322	Aluminum Alloy	12.31	0.737	0.314	0.337	0.111		0.062	0.099	0.102	0.05	0.021	0.052		45×35
NCS AH49323	Aluminum Alloy	8.98	0.93	3.34	0.366	0.19	0.05	0.284	0.842	0.144	0.055	0.158			45×35
NCS AH49324	Aluminum Alloy	12.07	0.361	0.915	0.049	1.08	0.077	0.898	0.166	0.038	0.053	0.03	0.045	0.028	55×30
Number	Name	Chemical Composition(%)											Unit Size (mm)		
		Al	V	Sn	Cr	Fe	C	N*	H*	O*	Y	Mo		Zr	Si
NCS AH93331	Titanium Alloy	3.14	14.98	3.17	2.84	0.05	0.01	0.02	0.001	0.013					36×30
NCS AH93332	Titanium Alloy	3.13	2.82			0.042	0.01	0.01	0.001	0.1	<0.001				36×30
NCS AH93333	Titanium Alloy	6.14				0.253	0.061					3.25	1.64	0.298	36×25

Section 11 Set-up Sample

2) Nonferrous Metal

Number	Name	Chemical Composition(%)												Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Be	Na	
NCS AH49341	Aluminum Alloy	0.031	0.099	2.14	0.024	2.16	0.019	0.02	6.17	0.03	0.106	0.0006	0.0004	Φ55×35
NCS AH49342	Aluminum Alloy	0.059	0.178	0.018	1.02	6.09	0.013	0.0058	0.015	0.03	0.104			Φ45×30
NCS AH49343	Aluminum Alloy	0.075	0.316	0.032	0.025	2.85	0.178		0.022	(0.016)				Φ50×30
NCS AH49344	Aluminum Alloy	0.036	0.052	4.2	0.589	1.34	0.034	0.032	0.115	0.086				Φ50×30
NCS AH49345	Aluminum Alloy	0.732	0.195	0.069	0.452	0.665	0.0037	0.0052	0.017	0.016				Φ55×35
NCS AH49346	Aluminum Alloy	7.8	0.423	1.23	0.436	0.468		0.061	0.156	0.185				Φ55×35
NCS AH49347	Aluminum Alloy	9.72	0.878	0.306	0.215	0.509	0.048	0.117	0.213	0.044	0.039			Φ55×35
NCS AH49348	Aluminum Alloy	8.96	0.247	1.51	0.258	0.553		0.037	0.076	0.222	0.036			Φ55×35
		Er	Cd	Pb	Sn	Sr								
NCS AH49341	Aluminum Alloy													
NCS AH49342	Aluminum Alloy	0.199												
NCS AH49343	Aluminum Alloy		0.0024	(0.0021)										
NCS AH49344	Aluminum Alloy													
NCS AH49345	Aluminum Alloy			0.0034										
NCS AH49346	Aluminum Alloy			0.049	0.0098									
NCS AH49347	Aluminum Alloy			0.043	0.048	0.014								
NCS AH49348	Aluminum Alloy			0.059	0.0089									
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Ni	Al	Cu	Fe	Pb	Cd	Sn	Si	La	Ce	Bi	Zn	
NCS AH52001	Zn-Ni alloy	0.63	0.21	0.0034	0.0025	0.0098	0.0017	0.0028						Φ40×25
NCS AH52002	Znic alloy	0.0027	11.77	0.0033	0.018	0.0016	0.0019	0.0022	0.044	0.023	0.034			Φ40×20
NCS AH52003	Znic alloy	0.0021	5.95	0.0042	0.0071	0.0068	0.0013	0.019	0.0032			0.5		Φ40×20
NCS AH52004	Al bronze	0.0023	9.01	86.81	3.53	0.007		0.025	0.028				0.057	Φ40×25
		Mn	P	Sb	S									
NCS AH52001	Zn-Ni alloy													
NCS AH52002	Znic alloy													
NCS AH52003	Znic alloy													
NCS AH52004	Al bronze	0.0063	0.0021	0.0004	0.0006									
Number	Name	Chemical Composition(%)												Unit Size (mm)
		Ag	Cu	Pb	Sb	Bi	Fe	Al	Zn	Cd	As	Au	Co	
NCS AH52005	Cr bronze	0.0072	99.4	0.011			0.053	0.0011	0.022		0.0052			Φ38×30
NCS AH52006	Lead free Tin solder	0.29	0.616	0.051	0.012	0.0093	0.0022	0.0005	0.0021	0.00001	0.0005	0.005	0.0002	Φ40×18
NCS AH52007	Lead free Tin solder	2.84	0.552	0.034	0.026	0.034	0.0065	0.0004	0.0017	0.00002	0.0007	0.0023	0.0002	Φ40×18
		In	Ni	P	S	Cr	Sn	Si	Mn					
NCS AH52005	Cr bronze		0.011	0.0074	0.002	0.446	0.013	0.011	0.0011					
NCS AH52006	Lead free Tin solder	0.01	0.016	0.0016										
NCS AH52007	Lead free Tin solder	0.0044	0.013	0.0009										

Section 12 Solution Standard

Number	Name	Nomonal Composition($\mu\text{g/mL}$)	Medium	Unit Size (mL)
NCS AH 11401	Lithium	1000	HCl(10%)	50
NCS AH 11402	Beryllium	1000	HNO ₃ (10%)	50
NCS AH 11403	Boron	1000	H ₂ O	50
NCS AH 11404	Sodium	1000	H ₂ O	50
NCS AH 11405	Magnesium	1000	HCl(5%)	50
NCS AH 11406	Aluminum	1000	HCl(10%)	50
NCS AH 11407	Silicon	1000	Na ₂ CO ₃	50
NCS AH 11408	Phosphorus(NH ₄)	1000	H ₂ O	50
NCS AH 11409	Phosphorus(K)	1000	H ₂ O	50
NCS AH 11410	Sulfur	1000	H ₂ O	50
NCS AH 11411	Potassium	1000	H ₂ O	50
NCS AH 11412	Calcium	1000	HCl(5%)	50
NCS AH 11413	Scandium	1000	HNO ₃ (20%)	50
NCS AH 11414	Titanium	1000	H ₂ SO ₄ (10%)	50
NCS AH 11415	Vanadium	1000	H ₂ SO ₄ (10%)	50
NCS AH 11416	Vanadium	1000	HCl(10%)	50
NCS AH 11417	Chromium	1000	HCl(10%)	50
NCS AH 11418	Manganese	1000	H ₂ SO ₄ (5%)	50
NCS AH 11419	Manganese	1000	HNO ₃ (10%)	50
NCS AH 11420	Iron	1000	HCl(10%)	50
NCS AH 11421	Cobalt	1000	HNO ₃ (5%)	50
NCS AH 11422	Nickel	1000	HNO ₃ (5%)	50
NCS AH 11423	Copper	1000	H ₂ SO ₄ (5%)	50
NCS AH 11424	Copper	1000	HCl(10%)	50
NCS AH 11425	Zinc	1000	HCl(10%)	50
NCS AH 11426	Gallium	1000	HCl(10%)	50
NCS AH 11427	Arsenic	1000	H ₂ SO ₄ (5%)	50
NCS AH 11428	Arsenic	1000	HCl(10%)	50
NCS AH 11429	Selenium	1000	HCl(10%)	50
NCS AH 11430	Rubidium	1000	HNO ₃ (5%)	50
NCS AH 11431	Strontium	1000	H ₂ O	50
NCS AH 11432	Yttrium	1000	HCl(10%)	50
NCS AH 11433	Zirconium	1000	HCl(10%)	50
NCS AH 11434	Niobium	1000	HF(5%)	50
NCS AH 11435	Molybdenum	1000	H ₂ SO ₄ (5%)	50
NCS AH 11437	Rhodium	1000	HNO ₃ (10%)	50
NCS AH 11438	Palladium	1000	HCl(10%)	50
NCS AH 11439	Silver	1000	HNO ₃ (5%)	50
NCS AH 11440	Cadmium	1000	HCl(10%)	50
NCS AH 11441	Indium	1000	HCl(10%)	50
NCS AH 11442	Tin	1000	HCl(20%)	50
NCS AH 11443	Antimony	1000	H ₂ SO ₄ (25%)	50
NCS AH 11445	Cesium	1000	HNO ₃ (5%)	50
NCS AH 11446	Beryllium	1000	HCl(10%)	50
NCS AH 11447	Lanthanum	1000	HCl(10%)	50
NCS AH 11448	Cerium	1000	HNO ₃ (10%)	50
NCS AH 11449	Praseodymium	1000	HCl(10%)	50
NCS AH 11450	Neodymium	1000	HCl(10%)	50

Section 12 Solution Standard

Number	Name	Nominal Consistence(μg/mL)						Medium	Unit Size (mL)	
NCS AH 11451	Samarium	1000						HCl(10%)	50	
NCS AH 11452	Europium	1000						HCl(10%)	50	
NCS AH 11453	Gadolinium	1000						HCl(10%)	50	
NCS AH 11454	Terbium	1000						HCl(10%)	50	
NCS AH 11455	Dysprosium	1000						HCl(10%)	50	
NCS AH 11456	Holmium	1000						HCl(10%)	50	
NCS AH 11457	Erbium	1000						HCl(10%)	50	
NCS AH 11458	Thulium	1000						HCl(10%)	50	
NCS AH 11459	Yttbium	1000						HCl(10%)	50	
NCS AH 11460	Latetium	1000						HCl(10%)	50	
NCS AH 11461	Hafnium	1000						H ₂ SO ₄ (10%)	50	
NCS AH 11462	Tantalum	1000						HF(20%)	50	
NCS AH 11463	Tungsten	1000						NaOH(2%)	50	
NCS AH 11464	Rhenium	1000						HCl(10%)	50	
NCS AH 11466	Irdium	1000						HCl(10%)	50	
NCS AH 11467	Platinum	1000						HCl(10%)	50	
NCS AH 11468	Gold	1000						HCl(10%)	50	
NCS AH 11469	Mercury	1000						HNO ₃ (5%)	50	
NCS AH 11470	Thallium	1000						HNO ₃ (20%)	50	
NCS AH 11471	Lead	1000						HNO ₃ (10%)	50	
NCS AH 11472	Bismuth	1000						HNO ₃ (10%)	50	
NCSAH 11473	Germanium	1000						H ₂ O	50	
Number	Name	Nominal Consistence(μg/g)							Unit Size (in mL)	
NCS AH 76401	Lead in Water	1.00							20or100	
NCS AH 76402	Cadmium in Water	0.100							20or100	
NCSAH 76403	Mercury in Water	0.010							20or50	
NCSAH 76404	Fluoride in Water	1.00							100	
NCS AH 76404	Arsenic in Water	0.50							20or100	
Number	Name	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻	Nominal Consistence(μg/g)				Unit Size (in mL)	
NCSAH 76406	Anions in Water	22.0	4.50	38.0	1000				20or100	
Number	Name	Cd	Pb	Cu	Cr	Zn	Ni	Nominal Consistence(μg/g)		Unit Size (in mL)
NCSAH 76407	Matal in Water	0.100	1.00	1.00	0.500	5.00	0.500			20or100
NCSAH 76408	Matal in Water	10.0*	50*	30*	50*	90*	60*			20or100
* Unit Certified Value of the element is ng/g.										
Number	Name	Concentration(μg/g)							Unit Size (in mL)	
NCSAH 76409	Silver in Water	1000							20	
NCSAH 76410	Arsenic in Water	1000							20	
NCSAH 76411	Cadmium in Water	1000							20	
NCSAH 76412	Cobalt in Water	1000							20	
NCSAH 76413	Chromium in Water	1000							20	
NCSAH 76414	Copper in Water	1000							20	
NCSAH 76415	Iron in Water	1000							20	
NCSAH 76416	Mercury in Water	1000							20	
NCSAH 76417	Nicked in Water	1000							20	
NCSAH 76418	Lead in Water	1000							20	
NCSAH 76419	Zinc in Water	1000							20	

Section 12 Solution Standard

Number	Name	Mass Fraction of Substance(10^{-6})	Unit Size (in mL)
NCS AH 76423	Gold Solution	100.0	20
NCS AH 76424	Lanthanum Solution	982.3	20
NCS AH 76425	Cerium Solution	951.5	20
NCS AH 76426	Samarium Solution	982.3	20
NCS AH 76427	Europium Solution	982.3	20
NCS AH 76428	Ytterbium Solution	982.3	20
NCS AH 76429	Lutetium Solution	982.3	20
NCS AH 76430	Yttrium Solution	982.3	20
Number	Name	Range Concentration(mg/L)	Unit Size (mL)
NCS AH 85401	Arsenic	0.1~0.8	20
NCS AH 85402	Ammonia Nitrogen	0.5~5	20
NCS AH 85403	Nitrite Nitrogen	0.05~0.2	20
NCS AH 85404	Nitrite Nitrogen	0.5~5	20
NCS AH 85405	Cu,Pb,Zn,Cd,Ni,Cr	Cu0.5~2,Pb0.5~2,Zn0.1~1,Cd0.1~1,Ni0.1~2,Cr0.1~2	20
NCS AH 85406	F ⁻ ,Cl ⁻ ,SO ₄ ²⁻	F 0.2~5,Cl ⁻ 0.5~100,SO ₄ ²⁻ 5~100	20
NCS AH 85407	Copper	0.01~2	20
NCS AH 85408	Lead	0.01~2	20
NCS AH 85409	Zinc	0.01~2	20
NCS AH 85140	Cadmium	0.01~2	20
NCS AH 85141	Nickel	0.1~2	20
NCS AH 85412	Chromium	0.1~2	20
NCS AH 85413	Fluorine	0.2~5	20
NCS AH 85414	Chlorine	0.01~100	20
NCS AH 85415	Sulfate	0.1~100	20
NCS AH 85416	Mercury	6~20(μ g/L)	20
NCS AH 85417	Total Cyanide	0.05~1	20
NCS AH 85418	Fe,Mn	0.01~2	20
NCS AH 85419	K,Na,Ca,Mg	K0.1~0.5,Na0.1~5,Ca0.1~10,Mg0.1~5	20
NCS AH 85420	Potassium	0.1~5	20
NCS AH 85421	Sodium	0.1~5	20
NCS AH 85422	Calcium	0.1~10	20
NCS AH 85423	Magneium	0.2~5	20
NCS AH 85424	Iron	0.1~5	20
NCS AH 85425	Manganese	0.1~5	20
NCS AH 85426	Total Nitrogen	1~8	20
NCS AH 85427	Vanadium	0.1~1	20
NCS AH 85428	Cobalt	0.05~1	20
NCS AH 85429	Selenium	0.01~1	20
NCS AH 85430	Molybdenum	0.05~1	20
NCS AH 85431	Cr ⁶⁺	0.01~5	20
NCS AH 85432	Phosphrate	0.05~5	20
NCS AH 85433	Total Phosphrous	0.05~5	20
NCS AH 85434	Barium	0.2~2	20
NCS AH 85435	Silver	0.2~1	20
NCS AH 85436	Antimony	0.5~2	20
NCS AH 85437	Aluminum	0.05~2	20
NCS AH 85438	Beryllium	5~20(μ g/L)	20
NCS AH 85439	Lithium	0.2~2.0	20
NCS AH 85440	Strontium	0.3~10	20
NCS AH 85441	Bromine	0.5~3	20

Section 13 Accelerator And Others

Number		Name	Type	Chemical Composition(Percent)								
				Grain size(mm)	Tap Density	C%	S%					
NCS NC 1111	Tungsten Accelerator		T11	0.9-1.6	7.6-8.6	≤ 0.0008	≤ 0.0005					
Number		Name	F=1, △ T=0	Melting Point (°C)			Unit Size					
				0.20°C /min	1.0°C /min		(in g)					
NCS AS 93101b	P-Nitrotoluene		51.64	52.09	52.66		2					
NCS AS 93102b	Naphthalene		80.08	80.50	81.01		2					
NCS AS 93103b	Benzoic acid		122.35	122.85	123.37		2					
NCS AS 93104b	1.6-Adipic acid		151.62	152.51	153.12		2					
NCS AS 93105a	Anisic acid		183.28	184.05	184.64		2					
NCS AS 93106	Anthracene		215.88	216.32	216.92		2					
NCS AS 93107b	P-Nitrobenzoic acid		239.58	240.57	241.33		2					
NCS AS 93108b	Anthraquinone		284.55	284.98	285.36		2					
Number		Name	0.2°C /min	Melting Point (°C)			Unit Size					
				0.5°C /min	1.0°C /min		(in g)					
NCS AS 93109	Azobenzol		68.34	68.50	68.60		2					
NCS AS 93110	Methylprotocatechuic		81.85	82.12	82.33		2					
NCS AS 93111	Acetanil		114.55	114.74	115.00		2					
NCS AS 93112	P-Acetophenetidine		134.96	135.08	135.23		2					
NCS AS 93113	Albexan		164.70	165.04	165.16		2					
NCS AS 93114	Amber acid		184.02	184.90	185.97		2					
NCS AS 93115	Sulfadimidine		198.32	198.60	198.71		2					
NCS AS 93116	Cyanoguanidine		208.62	209.38	210.16		2					
NCS AS 93117	Saccharin		228.41	228.65	228.84		2					
NCS AS 93118	Coffeine		236.26	236.51	236.60		2					
NCS AS 93119	Chocolax		261.43	261.67	262.61		2					
Number		Name	(%)				Unit Size					
			Purity of chloride	Purity	K	Cl	(in g)					
NCS GC 76202b	Sodium Chloride		99.987±0.008%				50					
NCS GC 76203d	Ethylenediamine Tetra—aceticAcid Disodium Salt		99.95±0.03%				40					
NCS GC 76204b	Purity of Sodium Carbonate		99.98				50					
NCS GC 76205d	Purity of Potassium Hydrogen Phthalate		99.99				50					
NCS GC 76206c	Purity of Sodium Oxalate		99.97				50					
NCS GC 76207a	Zinc Oxide		99.97				50					
NCS GC 76208c	Purity of Potassium Chloride		99.96 99.986				50					
NCS GC 76209e	Purity of Potassium Iodate		99.95				50					
NCS GC 76210a	Purity of Benzene		99.91				5ml					
Number		Name	(%)							Unit Size		
			N	Biuret	P	K	Ca*	Mg*	Mn*	Fe*	(in g)	
NCS GC76502	Nitrogen and Biuret in Urea		12.08		26.85		(2.1)	(0.2)		(3.5)	30	
NCS GC76503	Nitrogen and Biuret in Urea					44.79	(67.7)	(4)	(0.2)	(4.7)	40	
Number		Name	Level	Pb	Hg	Cr	Cd	(mg/kg)				Unit Size
											(in g)	
NCS RC 76001	Pb, Hg, Cr, Cd in Polypropylene	PP-L	98.2	93	98.4	9.26					30	
		PP-M	476	387	255	36.2					30	
		PP-H	981	922	978	92.3					30	
Number		Name	Level	Pb	Hg	Cr	Cd	(mg/kg)				Unit Size
											(mm)	
NCS RS 76001	Pb, Hg, Cr, Cd in Polypropylene	PP-L	98	92	99	9.2					40×4	
		PP-M	453	370	251	36.8					40×4	
		PP-H	961	907	983	92					40×4	



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