# INORGANIC CUSTOM-MADE&STOCK CERTIFIED REFERENCE MATERIALS

CPAchem

The experts in custom-made Certified Reference Materials

ISO 17034 ISO/IEC 17025 ISO 9001

www.cpachem.com


# CPAchem

■ **CPAchem** is a Bulgarian-French company, founded in 2001 when it started offering custom-made standards, prepared to specific customer requirements;

■ Nowadays more than 7000 laboratories worldwide use products manufactured both under CPAchem's own brand name or under private labels - since 2002 the quality of CPAchem's products has enabled the company to become and remain an OEM manufacturer for large international suppliers

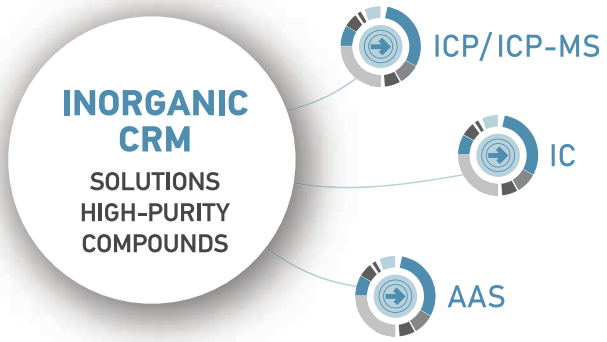

5400 square meters (58 125 square feet) including modern manufacturing and R&D laboratories, storage, office and recreational space

# CPAchem in brief

| | |
|---|---|
| 2020 | Certification according to ISO 17025 and ISO 17034 of the Pharmacopoeia products (European, British, US, Japanese, Chinese, Indian and International) – available upon request.<br>Started offering TIC&TOC and UV-VIS standards as CRM |
| 2019 | Moved to its new building with 5400 square meters (58 125 square feet) modern manufacturing and R&D laboratories, storage, office and recreational space<br>Started offering organic substances with certified weight |
| 2018 | ISO 17034 accredited<br>Started production of turbidity standards, Chinese Pharmacopoeia products |
| 2017 | Started production of Karl Fischer standards |
| 2016 | Started production of inorganic substances |
| 2015 | Started production of organic substances |
| 2014 | ISO 17025 (testing laboratory), ISO Guide 34 (CRM producer) accredited |
| 2012 | Started production of standards according to US, British, Indian, Japanese and International Pharmacopoeia |
| 2005 | Started production of organic standards |
| 2003 | Started production of standards according to European Pharmacopoeia |
| 2002 | ISO 9001 certified |
| 2001 | Founded, started producing and offering custom multi-component inorganic solutions |

# PRODUCT PORTFOLIO

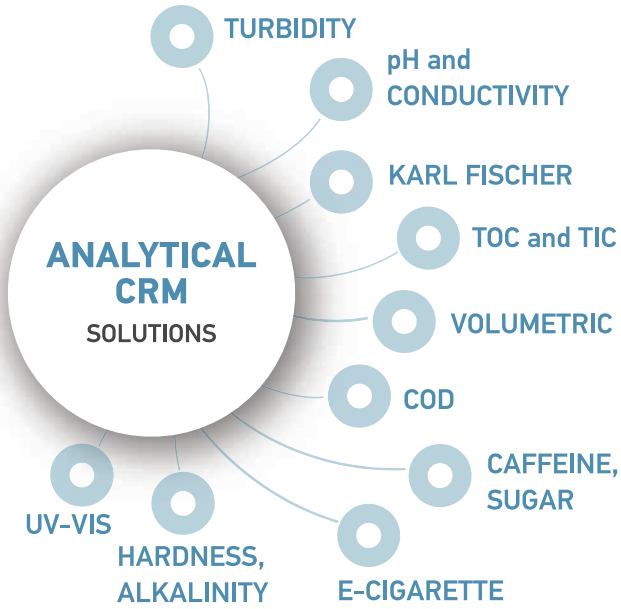
CPAchem produces both Inorganic and Organic Certified Reference Materials.

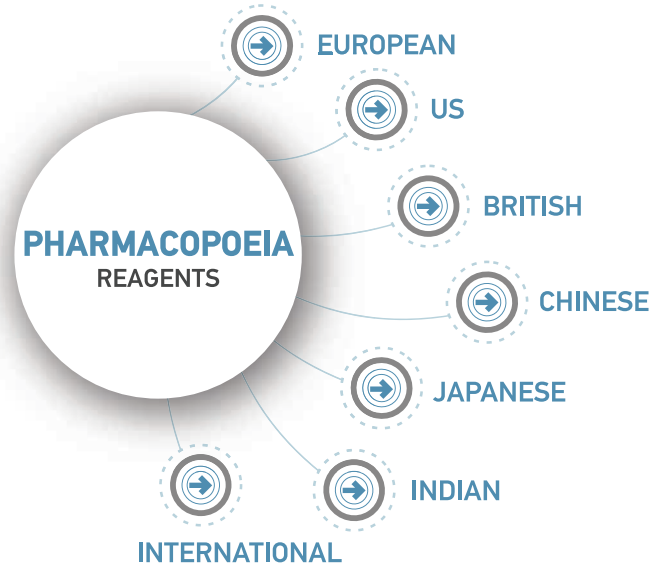




Decades of experience are brought in the production of certified reference materials to various analytical techniques.

CPAchem is the only producer in the world offering products according to seven different pharmacopoeias. Pharmacopoeia reagents are prepared according to the latest Pharmacopoeia edition recipes.




# CUSTOM PRODUCTS

CPAchem is the world leader in production of Custom-made standards, which are prepared to exactly match clients' needs and give them opportunities to quickly achieve their goals.

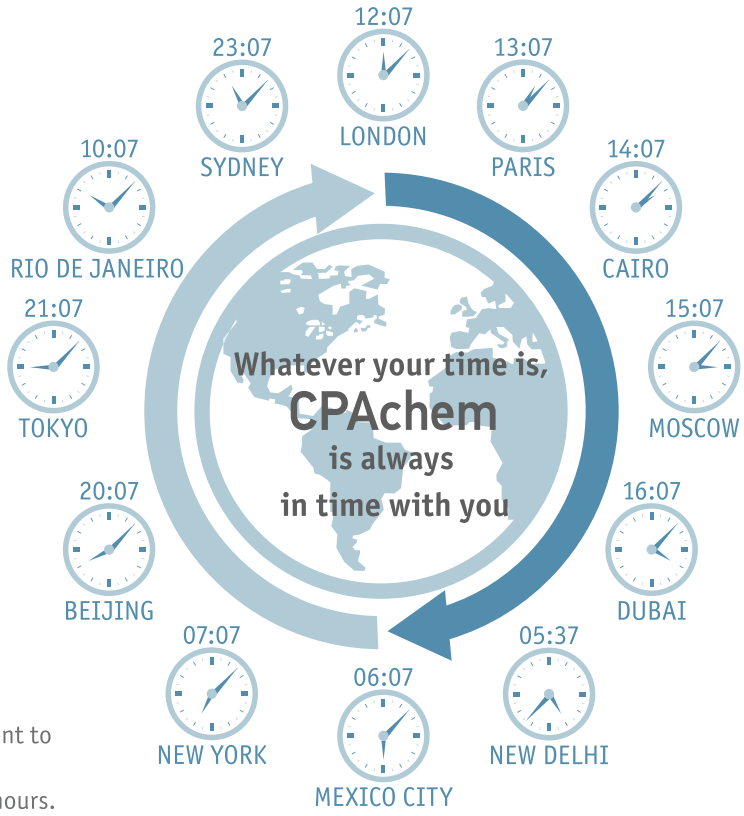
Custom-made products specifications include: various components, various component concentrations, various matrices, various packaging.

| Cost-effective solutions | Short lead time for preparation | 2-5 business days delivery | 24 hour Emergency orders |
|---|---|---|---|

# TECHNOLOGY

CPAchem relies mainly on a very knowledgeable and creative team of chemists who together with software engineers developed unique Computer-Aided Manufacturing software which performs and controls the whole production process. The company has been constantly investing in high-tech apparatus.

All these guarantee that CPAchem is always in time with its customers.




All customer inquiries sent to
**sales@cpachem.com**
are answered within 24 hours.

# ACCREDITATION AND QUALITY

CPAchem has the highest achievable quality level for reference material producers with one of the broadest accreditation scopes in the world.

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

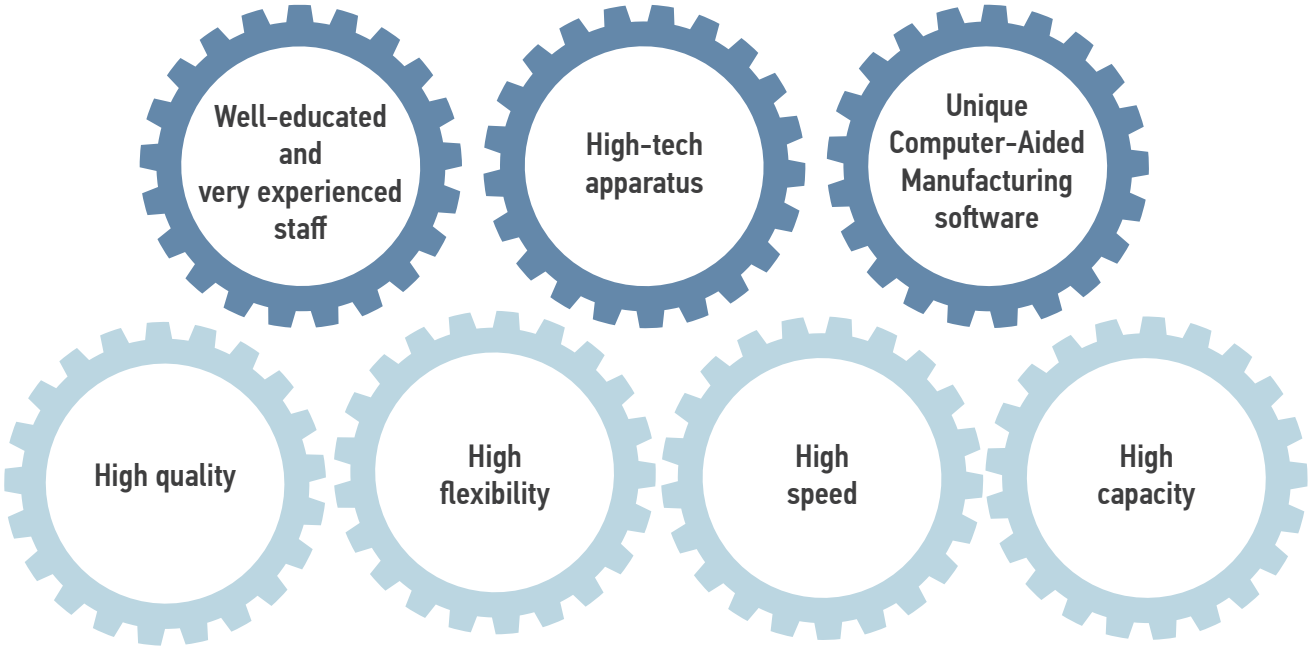
UKAS QUALITY MANAGEMENT 001

The main priority of CPAchem's management is to guarantee the best professional practice and quality throughout all stages of the production process, storage and distribution. The biggest proof for the quality of our products is that the percentage of valid claims has always been kept below 0.3%.

# What makes CPAchem different as a CRM producer?

- We answer every inquiry extremely fast – within the same day, not later than 24 hours
- We produce and ship an order (incl. for custom-made products) within 3-7 working days and process emergency orders within 24 hours when it is needed
- High capacity – ability to produce more than 200 different custom-made products per day without volume and quantity limits
- We guarantee high-quality of products – the number of valid claims has never exceeded 0.3% of the total number of orders per year
- CPAchem has the widest accreditation scope in the industry
- The control of all the processes is fully automated by our dedicated Computer Aided Manufacturing (CAM) software
- The software system performs and controls the whole working process:
    - starting from the raw materials' incoming control through
    - products preparation
    - certified values and uncertainties budget calculation
    - certificates generation
    - packaging and expedition

# What are CPAchem's main advantages?



# CPAchem Inorganic Standards Certification

Fully in tune with our company's philosophy we have been constantly trying to make our certificates more precise, detailed and easily accessible, meeting even the toughest demands of every user.

### Get it online, be green

The users could access 24/7 each product's certificate and download it from our web-site simply using the QR code printed on products' labels;

Sample CoAs for all stock products are also available on the web-site

### Main certificates features

- All certified values and their uncertainties are obtained analytically;
- The Certificate of Analysis, report the actual values and not simply the calculated ones;
- Several methods are used to obtain the certified values of the produced certified reference materials:
  - Instrumental - Ion Chromatography, ICP/OES or ICP/MS calibration;
  - Classical volumetric analysis;
  - Gravimetrical dilution of a concentrate, which had been calibrated by instrumental and/or classical analysis;
  - Weighted mean of the results of two independent calibration methods among: Instrumental (ICP/OES, ICP/MS or IC), Classical volumetric and Primary gravimetric*

  ** Primary gravimetric method is used only if the other methods are not usable. If it is possible the gravimetric preparation is always checked analytically for correct dilutions and eventual contamination*
- The uncertainties refer to each of the components separately and not to the uncertainty of the whole mixture
- Certified values and uncertainties for each component are traceable to SI (NIST, BAM)
- The CoAs show full traceability including Lot numbers of the raw materials and or reference standards
- All products lot numbers are unique and are related to given distributor's order
- Each solution is barcode identified. The barcodes determine products batches
- The shelf-life starts on the date the product is sent to the customer, i.e. customers always receive products with 100% shelf-life
- Compliant with ISO Guide 31 and ISO Guide 35

## MSDS

All products Safety Data Sheets could be accessed and downloaded from our web-page. The information is available in all most used languages. Altogether our language database includes 20 different languages.

# CERTIFICATION EXAMPLE

## *CERTIFIED REFERENCE MATERIAL*

**Solution of 4 components : 1000 mg/l each of Ca, Mg, K, Na; Matrix: 2% HNO3**

**Lot N:** 271425 **Barcode:** 87945782 **Ref N:** 91C8.1K.2N.L1
**Certification Date:** 28.02.2020

**Description of the Reference Material (CRM):** Solution of: Ca 1000mg/l; Mg 1000mg/l; K 1000mg/l; Na 1000mg/l; Matrix: 2% HNO3

**Ref N:** 91C8.1K.2N.L1

| Component | Certified Value and uncertainty [mg/l] | Metrological traceability |
|---|---|---|
| Ca | 1001.7 ± 2.0 (y) | NIST SRM No 3109a Lot 130213 |
| Mg | 1001.6 ± 2.2 (y) | NIST SRM No 3131a Lot 050302 |
| K | 1005.4 ± 3.5 (y) | NIST SRM No 3141a Lot 140813 |
| Na | 996.1 ± 2.2 (y) | NIST SRM No 3152a Lot 120715 |

***Notes:***

*(y) WQP 5.15.1.24 The certified value was obtained by a weighted mean of the results of two independent calibration methods among: Classical Volumetric,Primary Gravimetric, Instrumental (ICP/OES, ICP/MS or IC)*

Density* 1.019 g/cm3 at 20°C

| Starting Material, Purity* | Batch |
|---|---|
| CaCO3 99.995% | 82089085 |
| Mg(NO3)2 99.999% | 82089726 |
| KNO3 99.999% | 82085568 |
| NaNO3 99.999% | 82085612 |

** These values are not certified*

Storage Conditions: Stored under normal laboratory conditions

Shelf-life: 28.03.2022 Date of opening: .....

*(Recommended period of use should not exceed 12 months from date of opening)*

**Concept of Certification and traceability statement:**

*This certified reference material is produced using a high purity starting material, acid from sub-boiling and 18 MOhm deionized water.*

*The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA 4/02*

*Property of the result of a measurement whereby it can be related to stated references, usually national or international Standards, through an unbroken chain of comparisons all having stated uncertainties (ISO VIM)*

*The metrological traceability is assured through calibration on ICP/OES . The calibration curve is drawn using a*

# CERTIFICATION EXAMPLE

*series of standard solutions prepared from a certified reference material traceable to SI of NIST (SRM) or BAM (CRM). All contributions in relation to the certification of standard solutions are considered when evaluating the uncertainty.*
*The measurement results are traceable to SI. All analytical balances used for the preparation of the solution are calibrated yearly under an in-house procedure with analytical weights, traceable to DKD, and are checked daily.*
*Class A laboratory glassware is used.*
*The results from temperature measurement are traceable to SI. The thermometers used for solution's calibration are calibrated from an ISO 17025 accredited laboratory. The ambient conditions are controlled with a hygrometer calibrated from an ISO 17025 accredited laboratory.*

**Intended use:** ***For Laboratory Use Only***

| | |
|---|---|
| Calibration of ICP/OES, AAS | Validation of analytical methods |
| Preparation of "working reference samples" | Detection limit and linearity studies |

This statement is not intended to restrict the use for other purposes.

**Instructions for the correct use of this reference material:**
This certified reference material can be used directly or can be diluted in an appropriate high purity matrix. Only a clean class A glassware should be used. Do not pipet from container. Obtained concentration (in mg/l) after dilution is a result from the multiplication of certified value of CRM concentration and the CRM's volume used for dilution and divided into the flask's volume used for dilution.

**Stability and storage:**
This CRM is with a guaranteed stability until ±0.5% of the certified concentration within its shelf life. Stability is guaranteed, provided that the solution is kept in its original packaging, tightly closed stored, as written in the section: Storage Conditions.The laboratory performs stability tests according to MQP 5.14.1 therefore solutions with one and the same bar-code number might have different expiration dates.

**Hazardous situation:**
The normal laboratory safety precautions should be observed when working with this CRM. Further details for the handling of this CRM are available as safety data sheet.

**Level of homogeneity:**
This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.
To ensure sufficient homogeneity of the sample prior to use thoroughly mix by inversion.

**Names of certifying officers:**
Laboratory:
Manager:

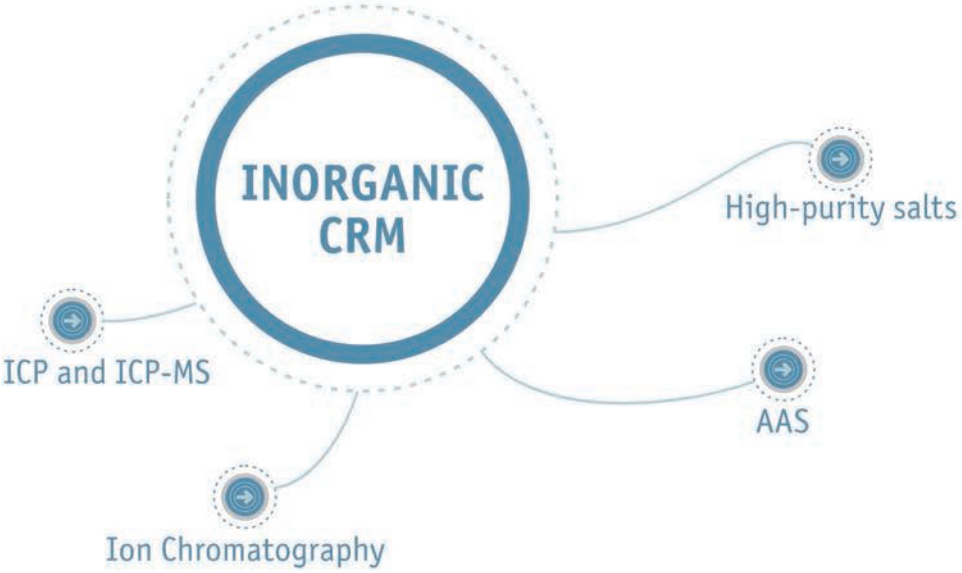
*This document QF 5.17.1/1 version 1 is designed and the certified value(s) and uncertainty(ies) are determined in accordance with ISO Guide 31, ISO Guide 35,and Eurachem / CITAC Guides*

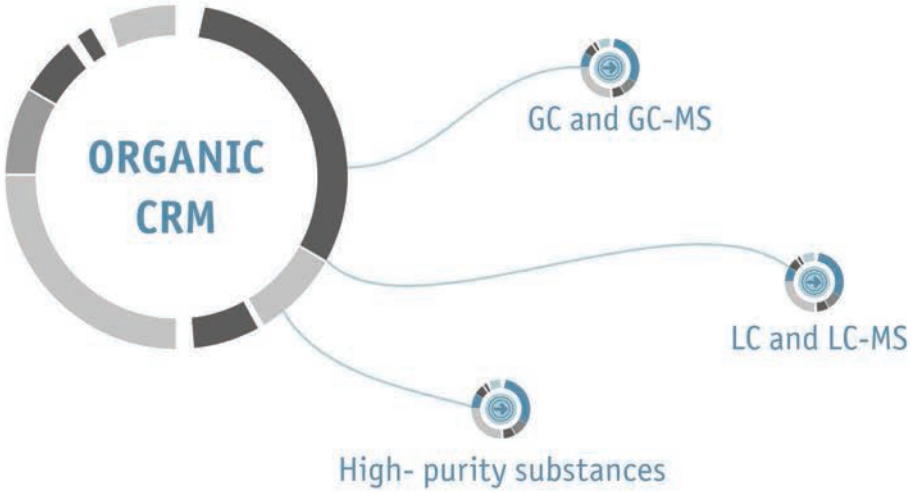
*This certificate relates solely to the lot number given above.*
*All processes (including generating of this certificate) are completely controlled by the specialized Computer-Aided-Manufacturing (CAM) software.*

*This Certified Reference Material was produced under a quality management system that is:*
*- Registered to ISO 9001 Quality Management System (Lloyd's Register Quality Assurance Ltd Cert No 0039638)*
*- Accredited according to ISO/IEC 17025 – Testing (ANAB Cert No AT-1836)*
*- Accredited according to ISO 17034 - Reference Material Producer (ANAB Cert No AR-1835)*

# BROWSE PRODUCTS AND PRICES

As CPAchem has been constantly adding products to its portfolio, browse the actual products and prices at www.cpachem.com




CUSTOM INORGANIC PRODUCTS INQUIRIES

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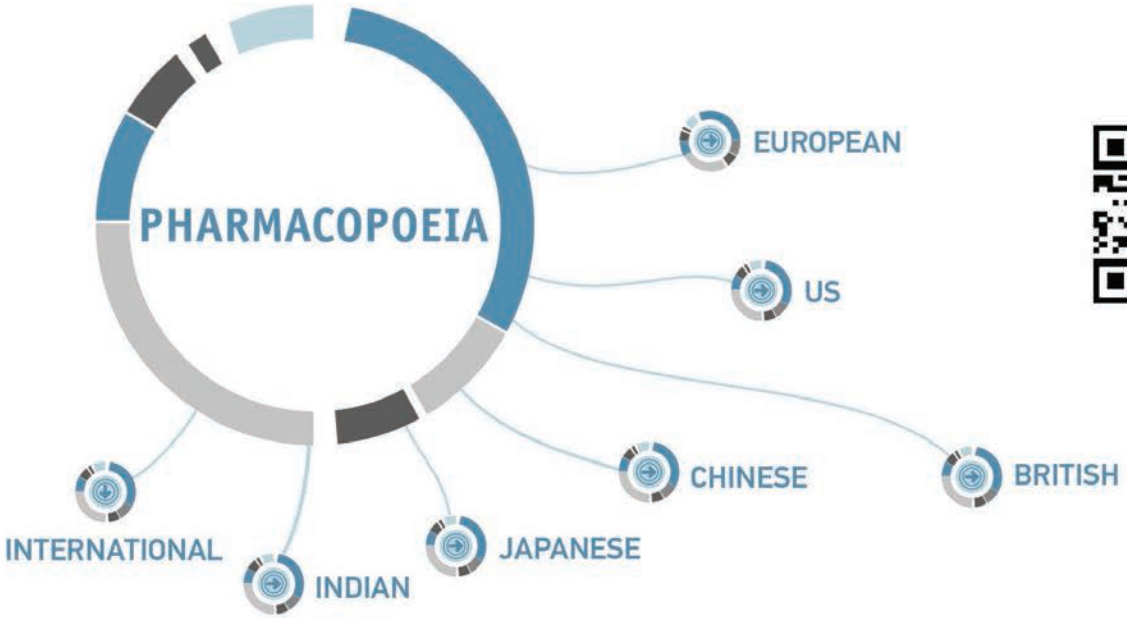


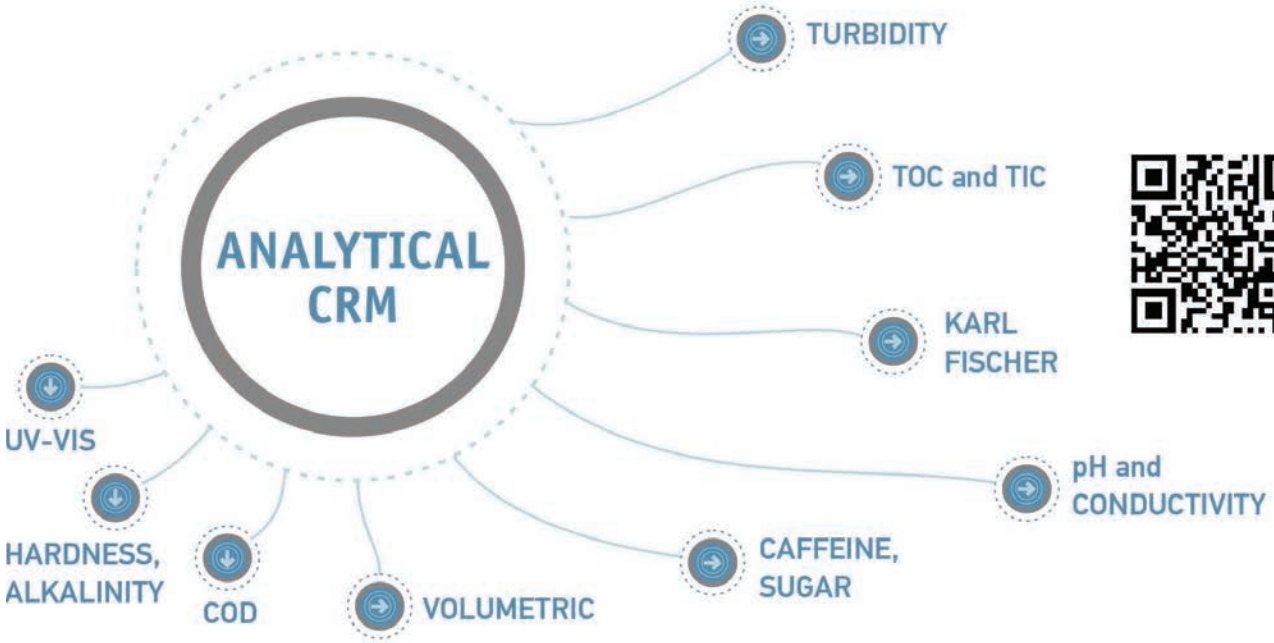


CUSTOM ANALYTICAL PRODUCTS INQUIRIES

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# AAS Standards & Modifiers

ISO 17034 ISO/IEC 17025 ISO 9001

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CPAchem

*The experts in custom-made Certified Reference Materials*

# Single-Element Standards for AAS

All AAS Single-element Standards are Certified Reference Materials, produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

## Single-Element Standards for AAS

*1000 mg/l for AAS Flame*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A001.2NP.L1 | Silver Ag - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A001.2NP.L5 | Silver Ag - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A002.2CP.L1 | Aluminium Al - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A002.2CP.L5 | Aluminium Al - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A002.2NP.L1 | Aluminium Al - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A002.2NP.L5 | Aluminium Al - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A003.2CP.L1 | Arsenic As - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A003.2CP.L5 | Arsenic As - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A003.2NP.L1 | Arsenic As - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A003.2NP.L5 | Arsenic As - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A004.2CP.L1 | Gold Au - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A004.2CP.L5 | Gold Au - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A005.W.L1 | Boron B - 1 g/l in H2O for AAS | 100 | ml | 12 | Yes |
| A005.W.L5 | Boron B - 1 g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A006.2CP.L1 | Barium Ba - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A006.2CP.L5 | Barium Ba - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A006.2NP.L1 | Barium Ba - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A006.2NP.L5 | Barium Ba - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A007.2CP.L1 | Beryllium Be - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A007.2CP.L5 | Beryllium Be - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A007.2N1FP.L1 | Beryllium Be - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A007.2N1FP.L5 | Beryllium Be - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A008.10NP.L1 | Bismuth Bi - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A008.10NP.L5 | Bismuth Bi - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A009.2CP.L1 | Calcium Ca - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A009.2CP.L5 | Calcium Ca - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A009.2NP.L1 | Calcium Ca - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A009.2NP.L5 | Calcium Ca - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A010.2CP.L1 | Cadmium Cd - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A010.2CP.L5 | Cadmium Cd - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A010.2NP.L1 | Cadmium Cd - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A010.2NP.L5 | Cadmium Cd - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A011.2NP.L1 | Cerium Ce - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A011.2NP.L5 | Cerium Ce - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A012.2CP.L1 | Cobalt Co - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A012.2CP.L5 | Cobalt Co - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A012.2NP.L1 | Cobalt Co - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A012.2NP.L5 | Cobalt Co - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A013.2CP.L1 | Chromium Cr - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A013.2CP.L5 | Chromium Cr - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A013.2NP.L1 | Chromium Cr - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A013.2NP.L5 | Chromium Cr - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A014.2NP.L1 | Cesium Cs - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A014.2NP.L5 | Cesium Cs - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A015.2CP.L1 | Copper Cu - 1 g/l in dilutedHCl for AAS | 100 | ml | 12 | Yes |
| A015.2CP.L5 | Copper Cu - 1 g/l in dilutedHCl for AAS | 500 | ml | 12 | Yes |
| A015.2NP.L1 | Cu Copper - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A015.2NP.L5 | Cu Copper - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A016.2NP.L1 | Dysprosium Dy - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A016.2NP.L5 | Dysprosium Dy - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A017.2NP.L1 | Erbium Er - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A017.2NP.L5 | Erbium Er - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A018.2NP.L1 | Europium Eu - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A018.2NP.L5 | Europium Eu - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A019.2CP.L1 | Iron Fe - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A019.2CP.L5 | Iron Fe - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A019.2NP.L1 | Iron Fe - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A019.2NP.L5 | Iron Fe - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A020.2NP.L1 | Gallium Ga - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A020.2NP.L5 | Gallium Ga - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A021.2NP.L1 | Gadolinium Gd - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A021.2NP.L5 | Gadolinium Gd - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A022.5N1FP.L1 | Germanium Ge - 1g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A022.5N1FP.L5 | Germanium Ge - 1g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A023.2N1FP.L1 | Hafnium Hf - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A023.2N1FP.L5 | Hafnium Hf - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A024.10NP.L1 | Mercury Hg - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A024.10NP.L5 | Mercury Hg - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A025.2NP.L1 | Holmium Ho - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A025.2NP.L5 | Holmium Ho - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A026.2NP.L1 | Indium In - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A026.2NP.L5 | Indium In - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A027.10CP.L1 | Iridium Ir - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A027.10CP.L5 | Iridium Ir - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A028.2CP.L1 | Potassium K - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A028.2CP.L5 | Potassium K - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A028.2NP.L1 | Potassium K - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A028.2NP.L5 | Potassium K - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A029.2CP.L1 | Lanthanum La - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A029.2CP.L5 | Lanthanum La - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A029.2NP.L1 | Lanthanum La - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A029.2NP.L5 | Lanthanum La - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A030.2NP.L1 | Lithium Li - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A030.2NP.L5 | Lithium Li - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A032.2CP.L1 | Magnesium Mg - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A032.2CP.L5 | Magnesium Mg - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A032.2NP.L1 | Magnesium Mg - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A032.2NP.L5 | Magnesium Mg - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A033.2CP.L1 | Manganese Mn - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A033.2CP.L5 | Manganese Mn - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A033.2NP.L1 | Manganese Mn - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A033.2NP.L5 | Manganese Mn - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A034.1N1FP.L1 | Molybdenum Mo - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A034.1N1FP.L5 | Molybdenum Mo - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A034.W.L1 | Molybdenum Mo - 1g/l in H2O for AAS | 100 | ml | 12 | Yes |
| A034.W.L5 | Molybdenum Mo - 1g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A035.1CP.L1 | Sodium Na - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A035.1CP.L5 | Sodium Na - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A035.2NP.L1 | Sodium Na - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A035.2NP.L5 | Sodium Na - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A035.W.L1 | Sodium Na - 1 g/l in H2O for AAS | 100 | ml | 12 | Yes |
| A035.W.L5 | Sodium Na - 1 g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A036.5N1FP.L1 | Niobium Nb - 1g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A036.5N1FP.L5 | Niobium Nb - 1g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A037.2NP.L1 | Neodymium Nd - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A037.2NP.L5 | Neodymium Nd - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A038.2NP.L1 | Nickel Ni - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A038.2NP.L5 | Nickel Ni - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A040.W.L1 | Phosphorous P - 1g/l in H2O for AAS | 100 | ml | 12 | Yes |
| A040.W.L5 | Phosphorous P - 1g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A041.2NP.L1 | Lead Pb - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A041.2NP.L5 | Lead Pb - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A042.5CP.L1 | Palladium Pd - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A042.5CP.L5 | Palladium Pd - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A042.5NP.L1 | Palladium Pd - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A042.5NP.L5 | Palladium Pd - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A044.10CP.L1 | Platinum Pt - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A044.10CP.L5 | Platinum Pt - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A045.2NP.L1 | Rubidium Rb - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A045.2NP.L5 | Rubidium Rb - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A046.5NP.L1 | Rhenium Re - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A046.5NP.L5 | Rhenium Re - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A047.5CP.L1 | Rhodium Rh - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A047.5CP.L5 | Rhodium Rh - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A048.5CP.L1 | Ruthenium Ru - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A048.5CP.L5 | Ruthenium Ru - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A049.W.L1 | Sulphur S - 1 g/l in H2O for AAS | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A049.W.L5 | Sulphur S - 1 g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A050.20CP.L1 | Antimony Sb - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A050.20CP.L5 | Antimony Sb - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A050.5N1FP.L1 | Antimony Sb - 1g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A050.5N1FP.L5 | Antimony Sb - 1g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A051.2NP.L1 | Scandium Sc - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A051.2NP.L5 | Scandium Sc - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A052.2NP.L1 | Selenium Se - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A052.2NP.L5 | Selenium Se - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A053.W.L1 | Silicon Si - 1 g/l in H2O for AAS | 100 | ml | 12 | Yes |
| A053.W.L5 | Silicon Si - 1 g/l in H2O for AAS | 500 | ml | 12 | Yes |
| A054.2NP.L1 | Samarium Sm - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A054.2NP.L5 | Samarium Sm - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A055.1N1FP.L1 | Tin Sn - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A055.1N1FP.L5 | Tin Sn - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A055.20CP.L1 | Tin Sn - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A055.20CP.L5 | Tin Sn - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A056.2CP.L1 | Strontium Sr - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A056.2CP.L5 | Strontium Sr - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A056.2NP.L1 | Strontium Sr - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A056.2NP.L5 | Strontium Sr - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A057.5N1FP.L1 | Tantalum Ta - 1g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A057.5N1FP.L5 | Tantalum Ta - 1g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A059.10NP.L1 | Tellurium Te - 1g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A059.10NP.L5 | Tellurium Te - 1g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A059.20CP.L1 | Tellurium Te - 1g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A059.20CP.L5 | Tellurium Te - 1g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A061.5N05FP.L1 | Titanum Ti - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A061.5N05FP.L5 | Titanum Ti - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A062.2NP.L1 | Thallium Tl - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A062.2NP.L5 | Thallium Tl - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A063.2NP.L1 | Thulium Tm - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A063.2NP.L5 | Thulium Tm - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A065.2NP.L1 | Vanadium V- 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A065.2NP.L5 | Vanadium V- 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A065.2SP.L1 | Vanadium V - 1 g/l in diluted H2SO4 for AAS | 100 | ml | 12 | Yes |
| A065.2SP.L5 | Vanadium V - 1 g/l in diluted H2SO4 for AAS | 500 | ml | 12 | Yes |
| A066.1N2FP.L1 | Tungsten W - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |
| A066.1N2FP.L5 | Tungsten W - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A067.2NP.L1 | Yttrium Y - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A067.2NP.L5 | Yttrium Y - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A068.2NP.L1 | Ytterbium Yb - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A068.2NP.L5 | Ytterbium Yb - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A069.2CP.L1 | Zinc Zn - 1 g/l in diluted HCl for AAS | 100 | ml | 12 | Yes |
| A069.2CP.L5 | Zinc Zn - 1 g/l in diluted HCl for AAS | 500 | ml | 12 | Yes |
| A069.2NP.L1 | Zinc Zn - 1 g/l in diluted HNO3 for AAS | 100 | ml | 12 | Yes |
| A069.2NP.L5 | Zinc Zn - 1 g/l in diluted HNO3 for AAS | 500 | ml | 12 | Yes |
| A070.2N05FP.L1 | Zirconium Zr - 1 g/l in diluted HNO3/HF for AAS | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A070.2N05FP.L5 | Zirconium Zr - 1 g/l in diluted HNO3/HF for AAS | 500 | ml | 12 | Yes |
| A070.5C05FP.L1 | Zirconium Zr - 1 g/l in diluted HCl/HF for AAS | 100 | ml | 12 | Yes |
| A070.5C05FP.L5 | Zirconium Zr - 1 g/l in diluted HCl/HF for AAS | 500 | ml | 12 | Yes |

## Single-Element Standards for AAS

*10 000 mg/l for AAS Flame*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| S101.5NP.L02 | Ag 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S102.5CP.L02 | Al 10 000mg/l in diluted HCl for AAS | 20 | ml | 12 | Yes |
| S103.5NP.L02 | As 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S105.W.L02 | B 10 000mg/l in H2O for AAS | 20 | ml | 12 | Yes |
| S106.5NP.L02 | Ba 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S107.5N1FP.L02 | Be 10 000mg/l in diluted HNO3/HF for AAS | 20 | ml | 12 | Yes |
| S108.10NP.L02 | Bi 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S109.5NP.L02 | Ca 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S110.5NP.L02 | Cd 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S112.5NP.L02 | Co 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S113.5NP.L02 | Cr 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S114.2NP.L02 | Cs 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S115.5NP.L02 | Cu 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S119.5NP.L02 | Fe 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S128.2NP.L02 | K 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S130.2NP.L02 | Li 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S132.5NP.L02 | Mg 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S133.5NP.L02 | Mn 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S134.5N4FP.L02 | Mo 10 000mg/l in diluted HNO3/ HF for AAS | 20 | ml | 12 | Yes |
| S135.2NP.L02 | Na 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S138.5NP.L02 | Ni 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S140.W.L02 | P 10 000mg/l in H2O for AAS | 20 | ml | 12 | Yes |
| S141.5NP.L02 | Pb 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S145.2NP.L02 | Rb 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S150.5N2FP.L02 | Sb 10 000mg/l in diluted HNO3/HF for AAS | 20 | ml | 12 | Yes |
| S151.5NP.L02 | Sc 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S152.5NP.L02 | Se 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S153.W.L02 | Si 10 000mg/l in H2O for AAS | 20 | ml | 12 | Yes |
| S155.5N2FP.L02 | Sn 10 000mg/l in diluted HNO3/ HF for AAS | 20 | ml | 12 | Yes |
| S156.5NP.L02 | Sr 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S159.20NP.L02 | Te 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S161.5N2FP.L02 | Ti 10 000mg/l in diluted HNO3/ HF for AAS | 20 | ml | 12 | Yes |
| S162.5NP.L02 | Tl 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S165.5NP.L02 | V 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S166.2N5FP.L02 | W 10 000mg/l in diluted HNO3/ HF for AAS | 20 | ml | 12 | Yes |
| S167.5NP.L02 | Y 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S169.5NP.L02 | Zn 10 000mg/l in diluted HNO3 for AAS | 20 | ml | 12 | Yes |
| S170.5N2FP.L02 | Zr 10 000mg/l in diluted HNO3 / HF for AAS | 20 | ml | 12 | Yes |

# Concentrates for AAS Flame

AAS concentrates combine the convenience of having prepared AAS solutions with the benefits of reduced shipping costs and lower storage space needed. Concentrates are designed to be quantitatively transferred and brought to volume. Certificates of Analysis show actual content, lot number, expiry date and traceability to SI of NIST (SRM) or CRM. Concentrated solutions are provided in sealed bottles. No ampoules to break. Easy to use. No need for pipetting, just empty the bottle in a volumetric flask, rinse and complete to volume.

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A101.20NP.L1 | Silver - concentrate to make 1L 1 g/l Ag in diluted HNO3 | 100 | ml | 12 | No |
| A102.5NP.L1 | Aluminium - concentrate to make 1L 1 g/l Al in diluted HNO3 | 100 | ml | 12 | No |
| A103.5CP.L1 | Arsenic - concentrate to make 1L 1 g/l As in diluted HCl | 100 | ml | 12 | No |
| A103.5NP.L1 | Arsenic - concentrate to make 1L 1 g/l As in diluted HNO3 | 100 | ml | 12 | No |
| A105.2AP.L1 | Boron - concentrate to make 1L 1 g/l B in NH3 | 100 | ml | 12 | No |
| A106.5CP.L1 | Barium - concentrate to make 1L 1 g/l Ba in diluted HCl | 100 | ml | 12 | No |
| A107.5CP.L1 | Beryllium - concentrate to make 1L 1 g/l Be in diluted HCl | 100 | ml | 12 | No |
| A107.5N1FP.L1 | Beryllium - concentrate to make 1L 1 g/l Be in diluted HNO3/ HF | 100 | ml | 12 | No |
| A108.10NP.L1 | Bismuth - concentrate to make 1L 1 g/l Bi in diluted HNO3 | 100 | ml | 12 | No |
| A109.5CP.L1 | Calcium - concentrate to make 1L 1 g/l Ca in diluted HCl | 100 | ml | 12 | No |
| A109.5NP.L1 | Calcium - concentrate to make 1L 1 g/l Ca in diluted HNO3 | 100 | ml | 12 | No |
| A110.5CP.L1 | Cadmium - concentrate to make 1L 1 g/l Cd in diluted HCl | 100 | ml | 12 | No |
| A110.5NP.L1 | Cadmium - concentrate to make 1L 1 g/l Cd in diluted HNO3 | 100 | ml | 12 | No |
| A112.5CP.L1 | Cobalt - concentrate to make 1L 1 g/l Co in diluted HCl | 100 | ml | 12 | No |
| A112.5NP.L1 | Cobalt - concentrate to make 1L 1 g/l Co in diluted HNO3 | 100 | ml | 12 | No |
| A113.5CP.L1 | Chromium - concentrate to make 1L 1 g/l Cr in diluted HCl | 100 | ml | 12 | No |
| A113.5NP.L1 | Chromium - concentrate to make 1L 1 g/l Cr in diluted HNO3 | 100 | ml | 12 | No |
| A114.2NP.L1 | Cesium - concentrate to make 1L 1 g/l Cs in diluted HNO3 | 100 | ml | 12 | No |
| A115.5NP.L1 | Copper - concentrate to make 1L 1 g/l Cu in diluted HNO3 | 100 | ml | 12 | No |
| A119.5CP.L1 | Iron - concentrate to make 1L 1 g/l Fe in diluted HCl | 100 | ml | 12 | No |
| A119.5NP.L1 | Iron - concentrate to make 1L 1 g/l Fe in diluted HNO3 | 100 | ml | 12 | No |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A122.5N1FP.L1 | Germanium - concentrate to make 1L 1 g/l Ge in diluted HNO3/HF | 100 | ml | 12 | No |
| A124.10NP.L1 | Mercury - concentrate to make 1L 1 g/l Hg in diluted HNO3 | 100 | ml | 12 | No |
| A128.2CP.L1 | Potassium - concentrate to make 1L 1 g/l K in diluted HCl | 100 | ml | 12 | No |
| A128.2NP.L1 | Potassium - concentrate to make 1L 1 g/l K in diluted HNO3 | 100 | ml | 12 | No |
| A130.2CP.L1 | Lithium - concentrate to make 1L 1 g/l Li in dilutedHCl | 100 | ml | 12 | No |
| A130.2NP.L1 | Lithium - concentrate to make 1L 1 g/l Li in diluted HNO3 | 100 | ml | 12 | No |
| A132.5CP.L1 | Magnesium - concentrate to make 1L 1 g/l Mg in diluted HCl | 100 | ml | 12 | No |
| A132.5NP.L1 | Magnesium - concentrate to make 1L 1 g/l Mg in diluted HNO3 | 100 | ml | 12 | No |
| A133.5NP.L1 | Manganese - concentrate to make 1L 1 g/l Mn in diluted HNO3 | 100 | ml | 12 | No |
| A134.5N4FP.L1 | Molybdenum - concentrate to make 1L 1 g/l Mo in diluted HNO3/HF | 100 | ml | 12 | No |
| A135.2CP.L1 | Sodium - concentrate to make 1L 1 g/l Na in diluted HCl | 100 | ml | 12 | No |
| A135.2NP.L1 | Sodium - concentrate to make 1L 1 g/l Na in diluted HNO3 | 100 | ml | 12 | No |
| A138.5NP.L1 | Nickel - concentrate to make 1L 1 g/l Ni in diluted HNO3 | 100 | ml | 12 | No |
| A140.W.L1 | Phosphorus - concentrate to make 1L 1 g/l P in H2O | 100 | ml | 12 | No |
| A141.5NP.L1 | Lead - concentrate to make 1L 1 g/l Pb in diluted HNO3 | 100 | ml | 12 | No |
| A145.2NP.L1 | Rubidium - concentrate to make 1L 1 g/l Rb in diluted HNO3 | 100 | ml | 12 | No |
| A150.10N2FP.L1 | Antimony - concentrate to make 1L 1 g/l Sb in diluted HNO3/HF | 100 | ml | 12 | No |
| A150.20CP.L1 | Antimony - concentrate to make 1L 1 g/l Sb in diluted HCl | 100 | ml | 12 | No |
| A151.5NP.L1 | Scandium - concentrate to make 1L 1 g/l Sc in diluted HNO3 | 100 | ml | 12 | No |
| A152.5NP | Selenium - concentrate to make 1L 1 g/l Se in diluted HNO3 | 100 | ml | 12 | No |
| A153.W.L1 | Silicon - concentrate to make 1L 1 g/l Si in H2O | 100 | ml | 12 | No |
| A155.2N2FP.L1 | Tin - concentrate to make 1L Sn 1 g/l in diluted HNO3/HF | 100 | ml | 12 | No |
| A155.5CP.L1 | Tin - concentrate to make 1L 1 g/l Sn in diluted HCl | 100 | ml | 12 | No |
| A156.2CP.L1 | Strontium - concentrate to make 1L 1 g/l Sr in diluted HCl | 100 | ml | 12 | No |
| A156.5NP.L1 | Strontium - concentrate to make 1L 1 g/l Sr in diluted HNO3 | 100 | ml | 12 | No |
| A159.20CP.L1 | Tellurium - concentrate to make 1L 1 g/l Te in diluted HCl | 100 | ml | 12 | No |
| A159.20NP.L1 | Tellurium - concentrate to make 1L 1 g/l Te in diluted HNO3 | 100 | ml | 12 | No |
| A161.5N2FP.L1 | Titanium - concentrate to make 1L 1 g/l Ti in diluted HNO3/HF | 100 | ml | 12 | No |
| A162.5NP.L1 | Thallium - concentrate to make 1L 1 g/l Tl in diluted HNO3 | 100 | ml | 12 | No |
| A165.5NP.L1 | Vanadium - concentrate to make 1L 1 g/l V in diluted HNO3 | 100 | ml | 12 | No |
| A166.2N5FP.L1 | Tungsten - concentrate to make 1L 1 g/l W in diluted HNO3/HF | 100 | ml | 12 | No |
| A167.5NP.L1 | Yttrium - concentrate to make 1L 1 g/l Y in diluted HNO3 | 100 | ml | 12 | No |
| A169.5CP.L1 | Zinc - concentrate to make 1L 1 g/l Zn in diluted HCl | 100 | ml | 12 | No |
| A169.5NP.L1 | Zinc - concentrate to make 1L 1 g/l Zn in diluted HNO3 | 100 | ml | 12 | No |
| A170.5C2FP.L1 | Zirconium - concentrate to make 1L 1 g/l Zr in diluted HCl/HF | 100 | ml | 12 | No |

# Single-Element Standards in Alcohol, KCN, and for Graphite Furnace

All Single-element Standards in alcohol, KCN and the ones for graphite furnace are Certified Reference Materials, produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

## Single-Element Standards in Alcohol

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A009.2C12EL.L1 | Calcium Ca - 1 g/l in HCl 2%; C2H5OH 12%; | 100 | ml | 12 | Yes |
| A009.2C12EL.L5 | Calcium Ca - 1 g/l in HCl 2%; C2H5OH 12%; | 500 | ml | 12 | Yes |
| A015.2C12EL.L1 | Copper Cu - 1g/l in HCl 2%; C2H5OH 12%; | 100 | ml | 12 | Yes |
| A015.2C12EL.L5 | Copper Cu - 1g/l in HCl 2%; C2H5OH 12%; | 500 | ml | 12 | Yes |
| A019.2C12EL.L1 | Iron Fe - 1 g/l in HCl 2%; C2H5OH 12%; | 100 | ml | 12 | Yes |
| A019.2C12EL.L5 | Iron Fe - 1 g/l in HCl 2%; C2H5OH 12%; | 500 | ml | 12 | Yes |
| A028.2C12EL.L1 | Potassium K - 1g/l in HCl 2%; C2H5OH 12%; | 100 | ml | 12 | Yes |
| A028.2C12EL.L5 | Potassium K - 1g/l in HCl 2%; C2H5OH 12%; | 500 | ml | 12 | Yes |
| A035.2C12EL.L1 | Sodium Na - 1g/l in 2% HCl; 12% C2H5OH | 100 | ml | 12 | Yes |
| A035.2C12EL.L5 | Sodium Na - 1g/l in 2% HCl; 12% C2H5OH | 500 | ml | 12 | Yes |
| A069.2C12EL.L1 | Zinc Zn - 1g/l in HCl 2%; C2H5OH 12%; | 100 | ml | 12 | Yes |
| A069.2C12EL.L5 | Zinc Zn - 1g/l in HCl 2%; C2H5OH 12%; | 500 | ml | 12 | Yes |

## Single-Element Standards in KCN

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 691C.1K.04.L1 | Copper Cu 1000mg/l in KCN 0.4% for AAS | 100 | ml | 12 | Yes |
| 691C.1K.04.L5 | Copper Cu 1000mg/l in KCN 0.4% for AAS | 500 | ml | 12 | Yes |
| A965.1K.04.L1 | Gold Au - 1 g/l in KCN 0.4% for AAS | 100 | ml | 12 | Yes |
| A965.1K.04.L5 | Gold Au - 1 g/l in KCN 0.4% for AAS | 500 | ml | 12 | Yes |

## Single-Element Standards for Graphite Furnace

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| F2165.D02.1N.L05 | Arsenic 0.020mg/l; Nitric Acid 1%; | 50 | ml | 6 | Yes |
| F5519.D002.1N.L05 | Cadmium 0.002mg/l; Nitric Acid 1%; | 50 | ml | 6 | Yes |
| F1E9C.D02.1N.L05 | Lead 0.020mg/l; Nitric Acid 1%; | 50 | ml | 6 | Yes |
| F4C73.D01.1N.L05 | Manganese 0.010mg/l; Nitric Acid 1% | 50 | ml | 6 | Yes |
| F3836.D03.1N.L05 | Nickel 0.030mg/l; Nitric Acid 1% | 50 | ml | 6 | Yes |
| F1ED8.D02.1N.L05 | Antimony 0.020mg/l; Nitric Acid 1%; | 50 | ml | 6 | Yes |

# Matrix Modifiers and Ionisation Buffers

All Matrix Modifiers for GFAAS and Ionisation buffers, produced by CPAchem, use high-purity metals or salts in sub-boiling distilled acids. CPAchem's quality system is currently ISO 9001 certified. CPAchem's quality control laboratory is ISO 17025:2005 registered/certified. CPAchem is 17034:2016 registered/certified while demonstrating technical competence in the field of Reference Material Production.

## Matrix Modifiers for Graphite Furnace

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MM2F6A.10K.W.L05 | Mg(NO3)2 (99.999%) 10 g/l in H2O | 50 | ml | 24 | No |
| MM2F6A.20K.W.L05 | Mg(NO3)2 (99.999%) 20 g/l in H2O | 50 | ml | 24 | No |
| MM909D.50K.W.L05 | NH4NO3 (99.999%) 50 g/l in H2O | 50 | ml | 24 | No |
| MMCFE0.20K.1N.L05 | NH4H2PO4 (99.999%) 20 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MMCFE0.100K.1N.L05 | NH4H2PO4 (99.999%) 100 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MM9E04.10K.1N.L05 | Ni(NO3)2 (99.999%)10 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MM2323.10K.1N.L05 | Pd(NO3)2 (99.999%) 2 g/l + Mg(NO3)2 (99.999%) 10 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MM4CF5.2K.1N.L05 | Pd(NO3)2 (99.999%) 2 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MM4CF5.5K.1N.L05 | Pd(NO3)2 (99.999%) 5 g/l in 1% HNO3 | 50 | ml | 24 | No |
| MM4CF5.10K.15N.L05 | Pd(NO3)2 (99.999%) 10 g/l in diluted HNO3 (~ 15 %) | 50 | ml | 12 | No |

## Ionisation Buffers

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| IB514.1N.L1 | Cesium Cs 2% in HNO3 1% | 100 | ml | 12 | No |
| IB514.1N.L5 | Cesium Cs 2% in HNO3 1% | 500 | ml | 12 | No |
| IB529.2C.L1 | Lanthanum La 2% in HCl 2% | 100 | ml | 12 | No |
| IB529.2C.L5 | Lanthanum La 2% in HCl 2% | 500 | ml | 12 | No |
| IB530.1N.L1 | Lithium Li 2% i in HNO3 1% | 100 | ml | 12 | No |
| IB530.1N.L5 | Lithium Li 2% i in HNO3 1% | 500 | ml | 12 | No |
| IB556.2N.L1 | Strontium Sr 2% in HNO3 2% | 100 | ml | 12 | No |
| IB556.2N.L5 | Strontium Sr 2% in HNO3 2% | 500 | ml | 12 | No |
| IB556.2C.L1 | Strontium Sr 2% in HCl 2% | 100 | ml | 12 | No |
| IB556.2C.L5 | Strontium Sr 2% in HCl 2% | 500 | ml | 12 | No |

# Blanks & dilution matrices

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| AW.5CP.L1 | Water 5% HCl for AAS and UV-VIS | 100 | ml | 12 | No |
| AW.5CP.L5 | Water 5% HCl for AAS and UV-VIS | 500 | ml | 12 | No |
| AW.5CP.1L | Water 5% HCl for AAS and UV-VIS | 1000 | ml | 12 | No |
| AW.5NP.L1 | Water 5% HNO3 for AAS and UV-VIS | 100 | ml | 12 | No |
| AW.5NP.L5 | Water 5% HNO3 for AAS and UV-VIS | 500 | ml | 12 | No |
| AW.5NP.1L | Water 5% HNO3 for AAS and UV-VIS | 1000 | ml | 12 | No |
| DI01.L1 | High purity deionised water | 100 | ml | 6 | No |
| DI01.L5 | High purity deionised water | 500 | ml | 6 | No |
| DI01.1L | High purity deionised water | 1000 | ml | 6 | No |

# ICP Standards

# ICP Standards

All ICP Standards produced by CPAchem use high-purity metals or salts in sub-boiling distilled acids. The Standards are produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

## ICP Single-Element Standards

*1000 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C001.2NP.L03 | Silver Ag - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C001.2NP.L1 | Silver Ag - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C001.2NP.L25 | Silver Ag - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C001.2NP.L5 | Silver Ag - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C002.2CP.L03 | Aluminium Al- 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C002.2CP.L1 | Aluminium Al - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C002.2CP.L25 | Aluminium Al - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C002.2CP.L5 | Aluminium Al - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C002.2NP.L03 | Aluminium Al - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C002.2NP.L1 | Aluminium Al - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C002.2NP.L25 | Aluminium Al - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C002.2NP.L5 | Aluminium Al - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C003.2NP.L03 | Arsenic As - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C003.2NP.L1 | Arsenic As - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C003.2NP.L25 | Arsenic As - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C003.2NP.L5 | Arsenic As - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C004.2CP.L03 | Gold Au - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C004.2CP.L1 | Gold Au - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C004.2CP.L25 | Gold Au - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C004.2CP.L5 | Gold Au - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C005.W.L03 | Boron B - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C005.W.L1 | Boron B - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C005.W.L25 | Boron B - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C005.W.L5 | Boron B - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C006.2CP.L03 | Barium Ba - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C006.2CP.L1 | Barium Ba - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C006.2CP.L25 | Barium Ba - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C006.2CP.L5 | Barium Ba - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C006.2NP.L03 | Barium Ba - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C006.2NP.L1 | Barium Ba - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C006.2NP.L25 | Barium Ba - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C006.2NP.L5 | Barium Ba - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C007.2CP.L03 | Beryllium Be - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C007.2CP.L1 | Beryllium Be - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C007.2CP.L25 | Beryllium Be - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C007.2CP.L5 | Beryllium Be - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C007.2N05FP.L03 | Beryllium Be - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C007.2N05FP.L1 | Beryllium Be - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C007.2N05FP.L25 | Beryllium Be - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C007.2N05FP.L5 | Beryllium Be - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C008.10NP.L03 | Bismuth Bi - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C008.10NP.L1 | Bismuth Bi - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C008.10NP.L25 | Bismuth Bi - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C008.10NP.L5 | Bismuth Bi - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C009.2CP.L03 | Calcium Ca - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C009.2CP.L1 | Calcium Ca - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C009.2CP.L25 | Calcium Ca - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C009.2CP.L5 | Calcium Ca - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C009.2NP.L03 | Calcium Ca - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C009.2NP.L1 | Calcium Ca - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C009.2NP.L25 | Calcium Ca - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C009.2NP.L5 | Calcium Ca - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C010.2NP.L03 | Cadmium Cd - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C010.2NP.L1 | Cadmium Cd - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C010.2NP.L25 | Cadmium Cd - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C010.2NP.L5 | Cadmium Cd - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C011.2NP.L03 | Cerium Ce - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C011.2NP.L1 | Cerium Ce - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C011.2NP.L25 | Cerium Ce - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C011.2NP.L5 | Cerium Ce - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C012.2NP.L03 | Cobalt Co - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C012.2NP.L1 | Cobalt Co - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C012.2NP.L25 | Cobalt Co - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C012.2NP.L5 | Cobalt Co - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C013.2CP.L03 | Chromium Cr - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C013.2CP.L1 | Chromium Cr - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C013.2CP.L25 | Chromium Cr - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C013.2CP.L5 | Chromium Cr - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C013.2NP.L03 | Chromium Cr - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C013.2NP.L1 | Chromium Cr - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C013.2NP.L25 | Chromium Cr - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C013.2NP.L5 | Chromium Cr - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C014.2NP.L03 | Cesium Cs - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C014.2NP.L1 | Cesium Cs - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C014.2NP.L25 | Cesium Cs - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C014.2NP.L5 | Cesium Cs - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C014.W.L03 | Cesium Cs - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C014.W.L1 | Cesium Cs - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C014.W.L25 | Cesium Cs - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C014.W.L5 | Cesium Cs - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C015.2NP.L03 | Copper Cu - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C015.2NP.L1 | Copper Cu - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C015.2NP.L25 | Copper Cu - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C015.2NP.L5 | Copper Cu - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C016.2NP.L03 | Dysprosium Dy - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C016.2NP.L1 | Dysprosium Dy - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C016.2NP.L25 | Dysprosium Dy - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C016.2NP.L5 | Dysprosium Dy - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C017.2NP.L03 | Erbium Er - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C017.2NP.L1 | Erbium Er - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C017.2NP.L25 | Erbium Er - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C017.2NP.L5 | Erbium Er - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C018.2NP.L03 | Europium Eu - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C018.2NP.L1 | Europium Eu - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C018.2NP.L25 | Europium Eu - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C018.2NP.L5 | Europium Eu - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C019.2CP.L03 | Iron Fe - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C019.2CP.L1 | Iron Fe - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C019.2CP.L25 | Iron Fe - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C019.2CP.L5 | Iron Fe - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C019.2NP.L03 | Iron Fe - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C019.2NP.L1 | Iron Fe - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C019.2NP.L25 | Iron Fe - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C019.2NP.L5 | Iron Fe - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C020.2NP.L03 | Gallium Ga - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C020.2NP.L1 | Gallium Ga - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C020.2NP.L25 | Gallium Ga - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C020.2NP.L5 | Gallium Ga - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C021.2NP.L03 | Gadolinium Gd - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C021.2NP.L1 | Gadolinium Gd - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C021.2NP.L25 | Gadolinium Gd - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C021.2NP.L5 | Gadolinium Gd - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C022.5N1FP.L03 | Germanium Ge - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C022.5N1FP.L1 | Germanium Ge - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C022.5N1FP.L25 | Germanium Ge - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C022.5N1FP.L5 | Germanium Ge - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C023.2C05FP.L03 | Hafnium Hf - 1000 mg/l in diluted HCl/HF for ICP | 30 | ml | 12 | Yes |
| C023.2C05FP.L1 | Hafnium Hf - 1000 mg/l in diluted HCl/HF for ICP | 100 | ml | 12 | Yes |
| C023.2C05FP.L25 | Hafnium Hf - 1000 mg/l in diluted HCl/HF for ICP | 250 | ml | 12 | Yes |
| C023.2C05FP.L5 | Hafnium Hf - 1000 mg/l in diluted HCl/HF for ICP | 500 | ml | 12 | Yes |
| C023.2N1FP.L03 | Hafnium Hf - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C023.2N1FP.L1 | Hafnium Hf - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C023.2N1FP.L25 | Hafnium Hf - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C023.2N1FP.L5 | Hafnium Hf - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C024.10NP.L03 | Mercury Hg - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C024.10NP.L1 | Mercury Hg - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C024.10NP.L25 | Mercury Hg - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C024.10NP.L5 | Mercury Hg - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C025.2NP.L03 | Holmium Ho - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C025.2NP.L1 | Holmium Ho - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C025.2NP.L25 | Holmium Ho - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C025.2NP.L5 | Holmium Ho - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C026.2NP.L03 | Indium In - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C026.2NP.L1 | Indium In - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C026.2NP.L25 | Indium In - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C026.2NP.L5 | Indium In - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C027.10CP.L03 | Iridium Ir - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C027.10CP.L1 | Iridium Ir - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C027.10CP.L25 | Iridium Ir - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C027.10CP.L5 | Iridium Ir - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C028.2NP.L03 | Potassium K - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C028.2NP.L1 | Potassium K - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C028.2NP.L25 | Potassium K - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C028.2NP.L5 | Potassium K - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C028.W.L03 | Potassium K - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C028.W.L1 | Potassium K - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C028.W.L25 | Potassium K - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C028.W.L5 | Potassium K - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C029.2NP.L03 | Lanthanum La - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C029.2NP.L1 | Lanthanum La - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C029.2NP.L25 | Lanthanum La - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C029.2NP.L5 | Lanthanum La - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C030.2CP.L03 | Lithium Li - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C030.2CP.L1 | Lithium Li - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C030.2CP.L25 | Lithium Li - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C030.2CP.L5 | Lithium Li - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C030.2NP.L03 | Lithium Li - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C030.2NP.L1 | Lithium Li - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C030.2NP.L25 | Lithium Li - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C030.2NP.L5 | Lithium Li - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C031.2NP.L03 | Lutetium Lu - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C031.2NP.L1 | Lutetium Lu - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C031.2NP.L25 | Lutetium Lu - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C031.2NP.L5 | Lutetium Lu - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C032.2NP.L03 | Magnesium Mg - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C032.2NP.L1 | Magnesium Mg - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C032.2NP.L25 | Magnesium Mg - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C032.2NP.L5 | Magnesium Mg - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C033.2CP.L03 | Manganese Mn - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C033.2CP.L1 | Manganese Mn - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C033.2CP.L25 | Manganese Mn - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C033.2CP.L5 | Manganese Mn - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C033.2NP.L03 | Manganese Mn - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C033.2NP.L1 | Manganese Mn - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C033.2NP.L25 | Manganese Mn - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C033.2NP.L5 | Manganese Mn - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C034.1N1FP.L03 | Molybdenum Mo - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C034.1N1FP.L1 | Molybdenum Mo - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C034.1N1FP.L25 | Molybdenum Mo - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C034.1N1FP.L5 | Molybdenum Mo - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C034.4AP.L03 | Molybdenum Mo - 1000 mg/l in diluted NH3 for ICP | 30 | ml | 12 | Yes |
| C034.4AP.L1 | Molybdenum Mo - 1000 mg/l in diluted NH3 for ICP | 100 | ml | 12 | Yes |
| C034.4AP.L25 | Molybdenum Mo - 1000 mg/l in diluted NH3 for ICP | 250 | ml | 12 | Yes |
| C034.4AP.L5 | Molybdenum Mo - 1000 mg/l in diluted NH3 for ICP | 500 | ml | 12 | Yes |
| C035.2NP.L03 | Sodium Na - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C035.2NP.L1 | Sodium Na - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C035.2NP.L25 | Sodium Na - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C035.2NP.L5 | Sodium Na - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C035.W.L03 | Sodium Na - 1000 mg/l in Water for ICP | 30 | ml | 12 | Yes |
| C035.W.L1 | Sodium Na - 1000 mg/l in Water for ICP | 100 | ml | 12 | Yes |
| C035.W.L25 | Sodium Na - 1000 mg/l in Water for ICP | 250 | ml | 12 | Yes |
| C035.W.L5 | Sodium Na - 1000 mg/l in Water for ICP | 500 | ml | 12 | Yes |
| C036.5N1FP.L03 | Niobium Nb - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C036.5N1FP.L1 | Niobium Nb - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C036.5N1FP.L25 | Niobium Nb - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C036.5N1FP.L5 | Niobium Nb - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C037.2NP.L03 | Neodimium Nd - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C037.2NP.L1 | Neodimium Nd - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C037.2NP.L25 | Neodimium Nd - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C037.2NP.L5 | Neodimium Nd - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C038.2NP.L03 | Nickel Ni - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C038.2NP.L1 | Nickel Ni - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C038.2NP.L25 | Nickel Ni - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C038.2NP.L5 | Nickel Ni - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C039.2CP.L03 | Osmium Os - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C039.2CP.L1 | Osmium Os - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C039.2CP.L25 | Osmium Os - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C039.2CP.L5 | Osmium Os - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C040.05SP.L03 | Phosphorus P -1000 mg/l in diluted H2SO4 for ICP | 30 | ml | 12 | Yes |
| C040.05SP.L1 | Phosphorus P -1000 mg/l in diluted H2SO4 for ICP | 100 | ml | 12 | Yes |
| C040.05SP.L25 | Phosphorus P -1000 mg/l in diluted H2SO4 for ICP | 250 | ml | 12 | Yes |
| C040.05SP.L5 | Phosphorus P -1000 mg/l in diluted H2SO4 for ICP | 500 | ml | 12 | Yes |
| C040.W.L03 | Phosphorus P - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C040.W.L1 | Phosphorus P - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C040.W.L25 | Phosphorus P - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C040.W.L5 | Phosphorus P - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C041.2NP.L03 | Lead Pb - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C041.2NP.L1 | Lead Pb - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C041.2NP.L25 | Lead Pb - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C041.2NP.L5 | Lead Pb - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C042.5CP.L03 | Palladium Pd - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C042.5CP.L1 | Palladium Pd - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C042.5CP.L25 | Palladium Pd - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C042.5CP.L5 | Palladium Pd - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C042.5NP.L03 | Palladium Pd - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C042.5NP.L1 | Palladium Pd - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |

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|---|---|---|---|---|---|
| C042.5NP.L25 | Palladium Pd - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C042.5NP.L5 | Palladium Pd - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C043.2NP.L03 | Praseodymium Pr - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C043.2NP.L1 | Praseodymium Pr - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C043.2NP.L25 | Praseodymium Pr - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C043.2NP.L5 | Praseodymium Pr - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C044.10CP.L03 | Platinum Pt - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C044.10CP.L1 | Platinum Pt - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C044.10CP.L25 | Platinum Pt - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C044.10CP.L5 | Platinum Pt - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C045.2NP.L03 | Rubidium Rb - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C045.2NP.L1 | Rubidium Rb - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C045.2NP.L25 | Rubidium Rb - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C045.2NP.L5 | Rubidium Rb - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C045.W.L03 | Rubidium Rb - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C045.W.L1 | Rubidium Rb - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C045.W.L25 | Rubidium Rb - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C045.W.L5 | Rubidium Rb - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C046.2NP.L03 | Rhenium Re - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C046.2NP.L1 | Rhenium Re - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C046.2NP.L25 | Rhenium Re - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C046.2NP.L5 | Rhenium Re - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C046.W.L03 | Rhenium Re - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C046.W.L1 | Rhenium Re - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C046.W.L25 | Rhenium Re - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C046.W.L5 | Rhenium Re - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C047.5CP.L03 | Rhodium Rh - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C047.5CP.L1 | Rhodium Rh - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C047.5CP.L25 | Rhodium Rh - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C047.5CP.L5 | Rhodium Rh - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C048.5CP.L03 | Ruthenium Ru - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C048.5CP.L1 | Ruthenium Ru - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C048.5CP.L25 | Ruthenium Ru - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C048.5CP.L5 | Ruthenium Ru - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C049.W.L03 | Sulphur S - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C049.W.L1 | Sulphur S - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C049.W.L25 | Sulphur S - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C049.W.L5 | Sulphur S - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C050.20CP.L03 | Antimony Sb - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C050.20CP.L1 | Antimony Sb - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C050.20CP.L25 | Antimony Sb - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C050.20CP.L5 | Antimony Sb - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C050.5N1FP.L03 | Antimony Sb - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C050.5N1FP.L1 | Antimony Sb - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C050.5N1FP.L25 | Antimony Sb - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C050.5N1FP.L5 | Antimony Sb - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C051.2NP.L03 | Scandium Sc - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C051.2NP.L1 | Scandium Sc - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |

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|---|---|---|---|---|---|
| C051.2NP.L25 | Scandium Sc - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C051.2NP.L5 | Scandium Sc - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C052.2NP.L03 | Selenium Se - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C052.2NP.L1 | Selenium Se - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C052.2NP.L25 | Selenium Se - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C052.2NP.L5 | Selenium Se - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C053.W.L03 | Silicon Si - 1000 mg/l in H2O for ICP | 30 | ml | 12 | Yes |
| C053.W.L1 | Silicon Si - 1000 mg/l in H2O for ICP | 100 | ml | 12 | Yes |
| C053.W.L25 | Silicon Si - 1000 mg/l in H2O for ICP | 250 | ml | 12 | Yes |
| C053.W.L5 | Silicon Si - 1000 mg/l in H2O for ICP | 500 | ml | 12 | Yes |
| C054.2NP.L03 | Samarium Sm - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C054.2NP.L1 | Samarium Sm - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C054.2NP.L25 | Samarium Sm - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C054.2NP.L5 | Samarium Sm - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C055.1N1FP.L03 | Tin Sn - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C055.1N1FP.L1 | Tin Sn - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C055.1N1FP.L25 | Tin Sn - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C055.1N1FP.L5 | Tin Sn - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C055.20CP.L03 | Tin Sn - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C055.20CP.L1 | Tin Sn - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C055.20CP.L25 | Tin Sn - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C055.20CP.L5 | Tin Sn - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C056.2CP.L03 | Strontium Sr - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C056.2CP.L1 | Strontium Sr - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C056.2CP.L25 | Strontium Sr - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C056.2CP.L5 | Strontium Sr - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C056.2NP.L03 | Strontium Sr - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C056.2NP.L1 | Strontium Sr - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C056.2NP.L25 | Strontium Sr - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C056.2NP.L5 | Strontium Sr - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C057.5N1FP.L03 | Tantalum Ta - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C057.5N1FP.L1 | Tantalum Ta - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C057.5N1FP.L25 | Tantalum Ta - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C057.5N1FP.L5 | Tantalum Ta - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C058.2NP.L03 | Terbium Tb - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C058.2NP.L1 | Terbium Tb - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C058.2NP.L25 | Terbium Tb - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C058.2NP.L5 | Terbium Tb - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C059.20CP.L03 | Tellurum Te - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C059.20CP.L1 | Tellurum Te - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C059.20CP.L25 | Tellurum Te - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C059.20CP.L5 | Tellurum Te - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C059.20NP.L03 | Tellurum Te - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C059.20NP.L1 | Tellurum Te - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C059.20NP.L25 | Tellurum Te - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C059.20NP.L5 | Tellurum Te - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C060.2NP.L03 | Thorium Th - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C060.2NP.L1 | Thorium Th - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C060.2NP.L25 | Thorium Th - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C060.2NP.L5 | Thorium Th - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C061.5C05FP.L03 | Titanium Ti - 1000 mg/l in diluted HCl/HF for ICP | 30 | ml | 12 | Yes |
| C061.5C05FP.L1 | Titanium Ti - 1000 mg/l in diluted HCl/HF for ICP | 100 | ml | 12 | Yes |
| C061.5C05FP.L25 | Titanium Ti - 1000 mg/l in diluted HCl/HF for ICP | 250 | ml | 12 | Yes |
| C061.5C05FP.L5 | Titanium Ti - 1000 mg/l in diluted HCl/HF for ICP | 500 | ml | 12 | Yes |
| C061.5N05FP.L03 | Titanium Ti - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C061.5N05FP.L1 | Titanium Ti - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C061.5N05FP.L25 | Titanium Ti - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C061.5N05FP.L5 | Titanium Ti - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C062.2NP.L03 | Thallium Tl - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C062.2NP.L1 | Thallium Tl - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C062.2NP.L25 | Thallium Tl - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C062.2NP.L5 | Thallium Tl - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C063.2NP.L03 | Thulium Tm - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C063.2NP.L1 | Thulium Tm - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C063.2NP.L25 | Thulium Tm - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C063.2NP.L5 | Thulium Tm - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C064.2NP.L03 | Uranium U - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C064.2NP.L1 | Uranium U - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C064.2NP.L25 | Uranium U - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C064.2NP.L5 | Uranium U - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C065.2NP.L03 | Vanadium V - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C065.2NP.L1 | Vanadium V - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C065.2NP.L25 | Vanadium V - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C065.2NP.L5 | Vanadium V - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C065.2SP.L03 | Vanadium V - 1000 mg/l in diluted H2SO4 for ICP | 30 | ml | 12 | Yes |
| C065.2SP.L1 | Vanadium V - 1000 mg/l in diluted H2SO4 for ICP | 100 | ml | 12 | Yes |
| C065.2SP.L25 | Vanadium V - 1000 mg/l in diluted H2SO4 for ICP | 250 | ml | 12 | Yes |
| C065.2SP.L5 | Vanadium V - 1000 mg/l in diluted H2SO4 for ICP | 500 | ml | 12 | Yes |
| C066.1N2FP.L03 | Tungsten W - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C066.1N2FP.L1 | Tungsten W - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C066.1N2FP.L25 | Tungsten W - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C066.1N2FP.L5 | Tungsten W - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C066.4AP.L03 | Tungsten W - 1000 mg/l in NH3 for ICP | 30 | ml | 12 | Yes |
| C066.4AP.L1 | Tungsten W - 1000 mg/l in NH3 for ICP | 100 | ml | 12 | Yes |
| C066.4AP.L25 | Tungsten W - 1000 mg/l in NH3 for ICP | 250 | ml | 12 | Yes |
| C066.4AP.L5 | Tungsten W - 1000 mg/l in NH3 for ICP | 500 | ml | 12 | Yes |
| C067.2NP.L03 | Yttrium Y - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C067.2NP.L1 | Yttrium Y - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C067.2NP.L25 | Yttrium Y - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C067.2NP.L5 | Yttrium Y - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C068.2NP.L03 | Ytterbium Yb - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C068.2NP.L1 | Ytterbium Yb - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C068.2NP.L25 | Ytterbium Yb - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C068.2NP.L5 | Ytterbium Yb - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C069.2CP.L03 | Zinc Zn - 1000 mg/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C069.2CP.L1 | Zinc Zn - 1000 mg/l in diluted HCl for ICP | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C069.2CP.L25 | Zinc Zn - 1000 mg/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C069.2CP.L5 | Zinc Zn - 1000 mg/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C069.2NP.L03 | Zinc Zn - 1000 mg/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C069.2NP.L1 | Zinc Zn - 1000 mg/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C069.2NP.L25 | Zinc Zn - 1000 mg/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C069.2NP.L5 | Zinc Zn - 1000 mg/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C070.2N05FP.L03 | Zirconium Zr - 1000 mg/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C070.2N05FP.L1 | Zirconium Zr - 1000 mg/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C070.2N05FP.L25 | Zirconium Zr - 1000 mg/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C070.2N05FP.L5 | Zirconium Zr - 1000 mg/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C070.5C05FP.L03 | Zirconium Zr - 1000 mg/l in diluted HCl/HF for ICP | 30 | ml | 12 | Yes |
| C070.5C05FP.L1 | Zirconium Zr - 1000 mg/l in diluted HCl/HF for ICP | 100 | ml | 12 | Yes |
| C070.5C05FP.L25 | Zirconium Zr - 1000 mg/l in diluted HCl/HF for ICP | 250 | ml | 12 | Yes |
| C070.5C05FP.L5 | Zirconium Zr - 1000 mg/l in diluted HCl/HF for ICP | 500 | ml | 12 | Yes |

# ICP Single-Element Standards

*10 000 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C101.5NP.L03 | Silver Ag - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C101.5NP.L1 | Silver Ag - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C101.5NP.L25 | Silver Ag - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C101.5NP.L5 | Silver Ag - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C102.5CP.L03 | Aluminium Al - 10.00 +/- 0.02 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C102.5CP.L1 | Aluminium Al - 10.00 +/- 0.02 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C102.5CP.L25 | Aluminium Al - 10.00 +/- 0.02 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C102.5CP.L5 | Aluminium Al - 10.00 +/- 0.02 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C102.5NP.L03 | Aluminium Al - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C102.5NP.L1 | Aluminium Al - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C102.5NP.L25 | Aluminium Al - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C102.5NP.L5 | Aluminium Al - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C103.5NP.L03 | Arsenic As - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C103.5NP.L1 | Arsenic As - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C103.5NP.L25 | Arsenic As - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C103.5NP.L5 | Arsenic As - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C104.5CP.L03 | Gold Au - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C104.5CP.L1 | Gold Au - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C104.5CP.L25 | Gold Au - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C104.5CP.L5 | Gold Au - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C105.W.L03 | Boron B - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C105.W.L1 | Boron B - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C105.W.L25 | Boron B - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C105.W.L5 | Boron B - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C106.1NP.L1 | Barium Ba - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C106.1NP.L25 | Barium Ba - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C106.1NP.L5 | Barium Ba - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C106.1NP.L03 | Barium Ba - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C106.5CP.L03 | Barium Ba - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C106.5CP.L1 | Barium Ba - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C106.5CP.L25 | Barium Ba - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C106.5CP.L5 | Barium Ba - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C107.5N1FP.L03 | Beryllium Be - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C107.5N1FP.L1 | Beryllium Be - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C107.5N1FP.L25 | Beryllium Be - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C107.5N1FP.L5 | Beryllium Be - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C108.10NP.L03 | Bismuth Bi - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C108.10NP.L1 | Bismuth Bi - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C108.10NP.L25 | Bismuth Bi - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C108.10NP.L5 | Bismuth Bi - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C109.2NP.L03 | Calcium Ca - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C109.2NP.L1 | Calcium Ca - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C109.2NP.L25 | Calcium Ca - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C109.2NP.L5 | Calcium Ca - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C110.5NP.L03 | Cadmium Cd - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C110.5NP.L1 | Cadmium Cd - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C110.5NP.L25 | Cadmium Cd - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C110.5NP.L5 | Cadmium Cd - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C111.5NP.L03 | Cerium Ce - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C111.5NP.L1 | Cerium Ce - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C111.5NP.L25 | Cerium Ce - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C111.5NP.L5 | Cerium Ce - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C112.5NP.L03 | Cobalt Co - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C112.5NP.L1 | Cobalt Co - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C112.5NP.L25 | Cobalt Co - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C112.5NP.L5 | Cobalt Co - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C113.5CP.L03 | Chromium Cr - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C113.5CP.L1 | Chromium Cr - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C113.5CP.L25 | Chromium Cr - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C113.5CP.L5 | Chromium Cr - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C113.5NP.L03 | Chromium Cr - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C113.5NP.L1 | Chromium Cr - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C113.5NP.L25 | Chromium Cr - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C113.5NP.L5 | Chromium Cr - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C114.2NP.L03 | Cesium Cs - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C114.2NP.L1 | Cesium Cs - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C114.2NP.L25 | Cesium Cs - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C114.2NP.L5 | Cesium Cs - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C114.W.L03 | Cesium Cs - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C114.W.L1 | Cesium Cs - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C114.W.L25 | Cesium Cs - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C114.W.L5 | Cesium Cs - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C115.5NP.L03 | Copper Cu - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C115.5NP.L1 | Copper Cu - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C115.5NP.L25 | Copper Cu - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C115.5NP.L5 | Copper Cu - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C116.5NP.L03 | Dysprosium Dy - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C116.5NP.L1 | Dysprosium Dy - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C116.5NP.L25 | Dysprosium Dy - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C116.5NP.L5 | Dysprosium Dy - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C117.5NP.L03 | Erbium Er - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C117.5NP.L1 | Erbium Er - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C117.5NP.L25 | Erbium Er - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C117.5NP.L5 | Erbium Er - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C118.2NP.L03 | Europium Eu - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C118.2NP.L1 | Europium Eu - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C118.2NP.L25 | Europium Eu - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C118.2NP.L5 | Europium Eu - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C119.5CP.L03 | Iron Fe - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C119.5CP.L1 | Iron Fe - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C119.5CP.L25 | Iron Fe - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C119.5CP.L5 | Iron Fe - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C119.5NP.L03 | Iron Fe - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C119.5NP.L1 | Iron Fe - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C119.5NP.L25 | Iron Fe - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C119.5NP.L5 | Iron Fe - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C120.5NP.L03 | Gallium Ga - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C120.5NP.L1 | Gallium Ga - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C120.5NP.L25 | Gallium Ga - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C120.5NP.L5 | Gallium Ga - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C121.5NP.L03 | Gadolinium Gd - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C121.5NP.L1 | Gadolinium Gd - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C121.5NP.L25 | Gadolinium Gd - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C121.5NP.L5 | Gadolinium Gd - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C122.5N1FP.L03 | Germanium Ge - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C122.5N1FP.L1 | Germanium Ge - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C122.5N1FP.L25 | Germanium Ge - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C122.5N1FP.L5 | Germanium Ge - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C123.5N2FP.L03 | Hafnium Hf - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C123.5N2FP.L1 | Hafnium Hf - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C123.5N2FP.L25 | Hafnium Hf - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C123.5N2FP.L5 | Hafnium Hf - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C124.10NP.L03 | Mercury Hg - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C124.10NP.L1 | Mercury Hg - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C124.10NP.L25 | Mercury Hg - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C124.10NP.L5 | Mercury Hg - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C125.5NP.L03 | Holmium Ho - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C125.5NP.L1 | Holmium Ho - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C125.5NP.L25 | Holmium Ho - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C125.5NP.L5 | Holmium Ho - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C126.5NP.L03 | Indium In - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C126.5NP.L1 | Indium In - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C126.5NP.L25 | Indium In - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C126.5NP.L5 | Indium In - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C127.10CP.L03 | Iridium Ir - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C127.10CP.L1 | Iridium Ir - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C127.10CP.L25 | Iridium Ir - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C127.10CP.L5 | Iridium Ir - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C128.2NP.L03 | Potassium K - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C128.2NP.L1 | Potassium K - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C128.2NP.L25 | Potassium K - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C128.2NP.L5 | Potassium K - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C128.W.L03 | Potassium K - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C128.W.L1 | Potassium K - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C128.W.L25 | Potassium K - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C128.W.L5 | Potassium K - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C129.5NP.L03 | Lanthanum La - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C129.5NP.L1 | Lanthanum La - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C129.5NP.L25 | Lanthanum La - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C129.5NP.L5 | Lanthanum La - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C130.5NP.L03 | Lithium Li - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C130.5NP.L1 | Lithium Li - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C130.5NP.L25 | Lithium Li - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C130.5NP.L5 | Lithium Li - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C131.5NP.L03 | Lutetium Lu - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C131.5NP.L1 | Lutetium Lu - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C131.5NP.L25 | Lutetium Lu - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C131.5NP.L5 | Lutetium Lu - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C132.2NP.L03 | Magnesium Mg - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C132.2NP.L1 | Magnesium Mg - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C132.2NP.L25 | Magnesium Mg - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C132.2NP.L5 | Magnesium Mg - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C133.5CP.L03 | Manganese Mn - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C133.5CP.L1 | Manganese Mn - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C133.5CP.L25 | Manganese Mn - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C133.5CP.L5 | Manganese Mn - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C133.5NP.L03 | Manganese Mn - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C133.5NP.L1 | Manganese Mn - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C133.5NP.L25 | Manganese Mn - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C133.5NP.L5 | Manganese Mn - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C134.4AP.L03 | Molybdenum Mo - 10 g/l in NH3 for ICP | 30 | ml | 12 | Yes |
| C134.4AP.L1 | Molybdenum Mo - 10 g/l in NH3 for ICP | 100 | ml | 12 | Yes |
| C134.4AP.L25 | Molybdenum Mo - 10 g/l in NH3 for ICP | 250 | ml | 12 | Yes |
| C134.4AP.L5 | Molybdenum Mo - 10 g/l in NH3 for ICP | 500 | ml | 12 | Yes |
| C134.5N4FP.L03 | Molybdenum Mo - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C134.5N4FP.L1 | Molybdenum Mo - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C134.5N4FP.L25 | Molybdenum Mo - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C134.5N4FP.L5 | Molybdenum Mo - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C135.2NP.L03 | Sodium Na - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C135.2NP.L1 | Sodium Na - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C135.2NP.L25 | Sodium Na - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C135.2NP.L5 | Sodium Na - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C135.W.L03 | Sodium Na - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C135.W.L1 | Sodium Na - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C135.W.L25 | Sodium Na - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C135.W.L5 | Sodium Na - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C136.5N5FP.L03 | Niobium Nb - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C136.5N5FP.L1 | Niobium Nb - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C136.5N5FP.L25 | Niobium Nb - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C136.5N5FP.L5 | Niobium Nb - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C137.5NP.L03 | Neodimium Nd - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C137.5NP.L1 | Neodimium Nd - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C137.5NP.L25 | Neodimium Nd - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C137.5NP.L5 | Neodimium Nd - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C138.5NP.L03 | Nickel Ni - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C138.5NP.L1 | Nickel Ni - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C138.5NP.L25 | Nickel Ni - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C138.5NP.L5 | Nickel Ni - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C140.005SP.L03 | Phosphorus P -10 g/l in diluted H2SO4 for ICP | 30 | ml | 12 | Yes |
| C140.005SP.L1 | Phosphorus P -10 g/l in diluted H2SO4 for ICP | 100 | ml | 12 | Yes |
| C140.005SP.L25 | Phosphorus P -10 g/l in diluted H2SO4 for ICP | 250 | ml | 12 | Yes |
| C140.005SP.L5 | Phosphorus P -10 g/l in diluted H2SO4 for ICP | 500 | ml | 12 | Yes |
| C140.W.L03 | Phosphorus P -10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C140.W.L1 | Phosphorus P -10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C140.W.L25 | Phosphorus P -10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C140.W.L5 | Phosphorus P -10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C141.5NP.L03 | Lead Pb - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C141.5NP.L1 | Lead Pb - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C141.5NP.L25 | Lead Pb - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C141.5NP.L5 | Lead Pb - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C142.10NP.L03 | Palladium Pd - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C142.10NP.L1 | Palladium Pd - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C142.10NP.L25 | Palladium Pd - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C142.10NP.L5 | Palladium Pd - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C142.5CP.L03 | Palladium Pd - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C142.5CP.L1 | Palladium Pd - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C142.5CP.L25 | Palladium Pd - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C142.5CP.L5 | Palladium Pd - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C143.5NP.L03 | Praseodymium Pr - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C143.5NP.L1 | Praseodymium Pr - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C143.5NP.L25 | Praseodymium Pr - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C143.5NP.L5 | Praseodymium Pr - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C144.10CP.L03 | Platinum Pt - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C144.10CP.L1 | Platinum Pt - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C144.10CP.L25 | Platinum Pt - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C144.10CP.L5 | Platinum Pt - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C145.2NP.L03 | Rubidium Rb - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C145.2NP.L1 | Rubidium Rb - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C145.2NP.L25 | Rubidium Rb - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C145.2NP.L5 | Rubidium Rb - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C145.W.L03 | Rubidium Rb - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C145.W.L1 | Rubidium Rb - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C145.W.L25 | Rubidium Rb - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C145.W.L5 | Rubidium Rb - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C146.5NP.L03 | Rhenium Re - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C146.5NP.L1 | Rhenium Re - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C146.5NP.L25 | Rhenium Re - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C146.5NP.L5 | Rhenium Re - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C146.W.L03 | Rhenium Re - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C146.W.L1 | Rhenium Re - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C146.W.L25 | Rhenium Re - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C146.W.L5 | Rhenium Re - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C148.10CP.L03 | Ruthenium Ru - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C148.10CP.L1 | Ruthenium Ru - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C148.10CP.L25 | Ruthenium Ru - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C148.10CP.L5 | Ruthenium Ru - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C149.W.L03 | Sulphur S - 10.00 +/- 0.02 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C149.W.L1 | Sulphur S - 10.00 +/- 0.02 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C149.W.L25 | Sulphur S - 10.00 +/- 0.02 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C149.W.L5 | Sulphur S - 10.00 +/- 0.02 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C150.10N2FP.L03 | Antimony Sb - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C150.10N2FP.L1 | Antimony Sb - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C150.10N2FP.L25 | Antimony Sb - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C150.10N2FP.L5 | Antimony Sb - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C150.20CP.L03 | Antimony Sb - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C150.20CP.L1 | Antimony Sb - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C150.20CP.L25 | Antimony Sb - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C150.20CP.L5 | Antimony Sb - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C151.5NP.L03 | Scandium Sc - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C151.5NP.L1 | Scandium Sc - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C151.5NP.L25 | Scandium Sc - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C151.5NP.L5 | Scandium Sc - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C152.5NP.L03 | Selenium Se - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C152.5NP.L1 | Selenium Se - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C152.5NP.L25 | Selenium Se - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C152.5NP.L5 | Selenium Se - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C153.W.L03 | Silicon Si - 10 g/l in H2O for ICP | 30 | ml | 12 | Yes |
| C153.W.L1 | Silicon Si - 10 g/l in H2O for ICP | 100 | ml | 12 | Yes |
| C153.W.L25 | Silicon Si - 10 g/l in H2O for ICP | 250 | ml | 12 | Yes |
| C153.W.L5 | Silicon Si - 10 g/l in H2O for ICP | 500 | ml | 12 | Yes |
| C154.2NP.L03 | Samarium Sm - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C154.2NP.L1 | Samarium Sm - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C154.2NP.L25 | Samarium Sm - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C154.2NP.L5 | Samarium Sm - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C155.20CP.L03 | Tin Sn - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C155.20CP.L1 | Tin Sn - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C155.20CP.L25 | Tin Sn - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C155.20CP.L5 | Tin Sn - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C155.2N2FP.L03 | Tin Sn - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C155.2N2FP.L1 | Tin Sn - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C155.2N2FP.L25 | Tin Sn - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C155.2N2FP.L5 | Tin Sn - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C156.2CP.L03 | Strontium Sr - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C156.2CP.L1 | Strontium Sr - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C156.2CP.L25 | Strontium Sr - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C156.2CP.L5 | Strontium Sr - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C156.2NP.L03 | Strontium Sr - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C156.2NP.L1 | Strontium Sr - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C156.2NP.L25 | Strontium Sr - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C156.2NP.L5 | Strontium Sr - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C157.5N2FP.L03 | Tantalum Ta - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C157.5N2FP.L1 | Tantalum Ta - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C157.5N2FP.L25 | Tantalum Ta - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C157.5N2FP.L5 | Tantalum Ta - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C158.5NP.L03 | Terbium Tb - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C158.5NP.L1 | Terbium Tb - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C158.5NP.L25 | Terbium Tb - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C158.5NP.L5 | Terbium Tb - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C159.20NP.L03 | Tellurium Te - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C159.20NP.L1 | Tellurium Te - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C159.20NP.L25 | Tellurium Te - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C159.20NP.L5 | Tellurium Te - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C161.5C05FP.L03 | Titanium Ti - 10 g/l in diluted HCl/HF for ICP | 30 | ml | 12 | Yes |
| C161.5C05FP.L1 | Titanium Ti - 10 g/l in diluted HCl/HF for ICP | 100 | ml | 12 | Yes |
| C161.5C05FP.L25 | Titanium Ti - 10 g/l in diluted HCl/HF for ICP | 250 | ml | 12 | Yes |
| C161.5C05FP.L5 | Titanium Ti - 10 g/l in diluted HCl/HF for ICP | 500 | ml | 12 | Yes |
| C161.5N2FP.L03 | Titanium Ti - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C161.5N2FP.L1 | Titanium Ti - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C161.5N2FP.L25 | Titanium Ti - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C161.5N2FP.L5 | Titanium Ti - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |
| C162.5NP.L03 | Thallium Tl - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C162.5NP.L1 | Thallium Tl - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C162.5NP.L25 | Thallium Tl - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C162.5NP.L5 | Thallium Tl - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C163.5NP.L03 | Thulium Tm - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C163.5NP.L1 | Thulium Tm - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C163.5NP.L25 | Thulium Tm - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C163.5NP.L5 | Thulium Tm - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C164.5NP.L03 | Uranium U - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C164.5NP.L1 | Uranium U - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C164.5NP.L25 | Uranium U - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C164.5NP.L5 | Uranium U - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C165.5NP.L03 | Vanadium V - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C165.5NP.L1 | Vanadium V - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C165.5NP.L25 | Vanadium V - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C165.5NP.L5 | Vanadium V - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| C165.5SP.L03 | Vanadium V - 10 g/l in diluted H2SO4 for ICP | 30 | ml | 12 | Yes |
| C165.5SP.L1 | Vanadium V - 10 g/l in diluted H2SO4 for ICP | 100 | ml | 12 | Yes |
| C165.5SP.L25 | Vanadium V - 10 g/l in diluted H2SO4 for ICP | 250 | ml | 12 | Yes |
| C165.5SP.L5 | Vanadium V - 10 g/l in diluted H2SO4 for ICP | 500 | ml | 12 | Yes |
| C166.10AP.L03 | Tungsten W - 10 g/l in diluted NH3 for ICP | 30 | ml | 12 | Yes |
| C166.10AP.L1 | Tungsten W - 10 g/l in diluted NH3 for ICP | 100 | ml | 12 | Yes |
| C166.10AP.L25 | Tungsten W - 10 g/l in diluted NH3 for ICP | 250 | ml | 12 | Yes |
| C166.10AP.L5 | Tungsten W - 10 g/l in diluted NH3 for ICP | 500 | ml | 12 | Yes |
| C166.2N5FP.L03 | Tungsten W - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C166.2N5FP.L1 | Tungsten W - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C166.2N5FP.L25 | Tungsten W - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C166.2N5FP.L5 | Tungsten W - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C167.5NP.L03 | Yttrium Y - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C167.5NP.L1 | Yttrium Y - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C167.5NP.L25 | Yttrium Y - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C167.5NP.L5 | Yttrium Y - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C168.5NP.L03 | Ytterbium Yb - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C168.5NP.L1 | Ytterbium Yb - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C168.5NP.L25 | Ytterbium Yb - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C168.5NP.L5 | Ytterbium Yb - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C169.5CP.L03 | Zinc Zn - 10 g/l in diluted HCl for ICP | 30 | ml | 12 | Yes |
| C169.5CP.L1 | Zinc Zn - 10 g/l in diluted HCl for ICP | 100 | ml | 12 | Yes |
| C169.5CP.L25 | Zinc Zn - 10 g/l in diluted HCl for ICP | 250 | ml | 12 | Yes |
| C169.5CP.L5 | Zinc Zn - 10 g/l in diluted HCl for ICP | 500 | ml | 12 | Yes |
| C169.5NP.L03 | Zinc Zn - 10 g/l in diluted HNO3 for ICP | 30 | ml | 12 | Yes |
| C169.5NP.L1 | Zinc Zn - 10 g/l in diluted HNO3 for ICP | 100 | ml | 12 | Yes |
| C169.5NP.L25 | Zinc Zn - 10 g/l in diluted HNO3 for ICP | 250 | ml | 12 | Yes |
| C169.5NP.L5 | Zinc Zn - 10 g/l in diluted HNO3 for ICP | 500 | ml | 12 | Yes |
| C170.5C2FP.L03 | Zirconium Zr - 10 g/l in diluted HCl/HF for ICP | 30 | ml | 12 | Yes |
| C170.5C2FP.L1 | Zirconium Zr - 10 g/l in diluted HCl/HF for ICP | 100 | ml | 12 | Yes |
| C170.5C2FP.L25 | Zirconium Zr - 10 g/l in diluted HCl/HF for ICP | 250 | ml | 12 | Yes |
| C170.5C2FP.L5 | Zirconium Zr - 10 g/l in diluted HCl/HF for ICP | 500 | ml | 12 | Yes |
| C170.5N2FP.L03 | Zirconium Zr - 10 g/l in diluted HNO3/HF for ICP | 30 | ml | 12 | Yes |
| C170.5N2FP.L1 | Zirconium Zr - 10 g/l in diluted HNO3/HF for ICP | 100 | ml | 12 | Yes |
| C170.5N2FP.L25 | Zirconium Zr - 10 g/l in diluted HNO3/HF for ICP | 250 | ml | 12 | Yes |
| C170.5N2FP.L5 | Zirconium Zr - 10 g/l in diluted HNO3/HF for ICP | 500 | ml | 12 | Yes |

# Speciation Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| SP071.05O01NC.L1 | Arsenic (III) 1000mg/l in Sodium Hydroxide/ Sodium Cloride | 100 | ml | 12 | Yes |
| SP072.W.L1 | Arsenic (V) 1000mg/l in Water | 100 | ml | 12 | Yes |
| SP371.05O01NC.L1 | Arsenic (III) 100mg/l in Sodium Hydroxide/Sodium Cloride | 100 | ml | 12 | Yes |
| SP372.W.L1 | Arsenic (V) 100mg/l in Water | 100 | ml | 12 | Yes |
| SP073.2N.L1 | Chromium (III) 1000mg/l in diluted Nitric Acid | 100 | ml | 12 | Yes |
| SP074.W.L1 | Chromium (VI) 1000mg/l in Water | 100 | ml | 12 | Yes |
| SP373.5N.L1 | Chromium (III) 100mg/l in Nitric Acid | 100 | ml | 12 | Yes |
| SP374.W.L1 | Chromium (VI) 100mg/l in Water | 100 | ml | 12 | Yes |
| SP473.5N.L1 | Chromium (III) 10mg/l in Nitric Acid | 100 | ml | 6 | Yes |
| SP075.2N.L1 | Selenium (IV) 1000mg/l in diluted Nitric Acid | 100 | ml | 12 | Yes |
| SP076.01N.L1 | Selenium (VI) 1000mg/l in diluted Nitric Acid | 100 | ml | 12 | Yes |
| SP375.2N.L1 | Selenium (IV) 100mg/l in Nitric Acid | 100 | ml | 12 | Yes |
| SP376.01N.L1 | Selenium (VI) 100mg/l in Nitric Acid | 100 | ml | 12 | Yes |

# Multi-element Standards for ICP

## Instrument Check Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 1ED8.K2.2N.L1 | Spiking Standard 4R - 1 component; Sb 200mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| 91C8.10K.2N.L1 | Spiking Standard 2R - 4 components; 10 000mg/l each of Ca ; Mg ; K ; Na in HNO3 2% | 100 | ml | 12 | Yes |
| 4554.50.5N.L1 | Spiking Standard 3 - 12 components; Al 2000mg/l ; Ba 2000mg/l ; Fe 1000mg/l ; Co 500mg/l ; Mn 500mg/l ; Ni 500mg/l ; V 500mg/l ; Zn 500mg/l ; Cu 250mg/l ; Cr 200mg/l ; Be 50mg/l ; Ag 50mg/l in HNO3 5% | 100 | ml | 6 | Yes |

## EPA and ISO Methods

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| AE93.20.5N.L1 | EPA 200.7 - Mixed Calibration Standard 3 - 4 components; P 100mg/l ; Ce 20mg/l ; Co 20mg/l ; V 20mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| AE93.K2.5N.L1 | EPA 200.7 Calibration - CAL 3 - 4 components; P 1000mg/l ; Ce 200mg/l ; Co 200mg/l ; V 200mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 58DA.K1.5N.L1 | EPA 200.7 - Mixed Calibration Standard 4 - 5 components; Al 100mg/l ; Si 100mg/l ; Cr 50mg/l ; Zn 50mg/l ; Sn 40mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| FE99.10.5N.L1 | EPA 200.7 - Mixed Calibration Standard 5 - 6 components; Fe 100mg/l ; Pb 100mg/l ; Mg 100mg/l ; Tl 50mg/l ; Ni 20mg/l ; Be 10mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| 87EA.5.5N.L1 | EPA 200.7 - Mixed Calibration Standard 1 - 10 components; As 100mg/l ; Ca 100mg/l ; Sb 50mg/l ; Se 50mg/l ; B 20mg/l ; Cd 20mg/l ; Cu 20mg/l ; Mn 20mg/l ; Ba 10mg/l ; Ag 5mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| 0F81.5.5N.L1 | EPA 200.7 - Laboratory Performance Check Standard - 29 components; P 100mg/l ; K 100mg/l ; Si 100mg/l ; Al 20mg/l ; Sb 20mg/l ; As 20mg/l ; Ba 20mg/l ; Be 20mg/l ; B 20mg/l ; Cd 20mg/l ; Ca 20mg/l ; Cr 20mg/l ; Co 20mg/l ; Cu 20mg/l ; Fe 20mg/l ; Pb 20mg/l ; Li 20mg/l ; Mg 20mg/l ; Mn 20mg/l ; Mo 20mg/l ; Ni 20mg/l ; Se 20mg/l ; Na 20mg/l ; Sr 20mg/l ; Tl 20mg/l ; Sn 20mg/l ; V 20mg/l ; Zn 20mg/l ; Ag 5mg/l in HNO3 5% ; HF tr% | 100 | ml | 6 | Yes |
| 1ED8.K5.2N.L1 | EPA 6010 - Interference Check Standard 3 - 1 component; Sb 500mg/l in HNO3 2% ; HF tr% | 100 | ml | 12 | Yes |
| 7CF2.5.5N.L1 | EPA 6010 - Laboratory Performance Check Standard - 30 components; P 100mg/l ; K 100mg/l ; Si 100mg/l ; Al 20mg/l ; Sb 20mg/l ; As 20mg/l ; Ba 20mg/l ; Be 20mg/l ; B 20mg/l ; Cd 20mg/l ; Ca 20mg/l ; Cr 20mg/l ; Co 20mg/l ; Cu 20mg/l ; Fe 20mg/l ; Pb 20mg/l ; Li 20mg/l ; Mg 20mg/l ; Mn 20mg/l ; Mo 20mg/l ; Ni 20mg/l ; Se 20mg/l ; Na 20mg/l ; Sr 20mg/l ; Tl 20mg/l ; Sn 20mg/l ; Ti 20mg/l ; V 20mg/l ; Zn 20mg/l ; Ag 5mg/l in HNO3 5% ; HF tr% | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| FDA4.15.7N.L1 | ICP standard according to USP 232 dietary supplements - 4 components; Cd 5mg/l ; Pb 10mg/l ; As 15mg/l ; Hg 15mg/l in HNO3 7% | 100 | ml | 6 | Yes |
| 7F97.10.15C.L1 | ICP standard according to USP 232 parenteral dose 10 mg/l - 6 components each of Ir ; Pt ; Os ; Rh ; Pd ; Ru in HCl 15% | 100 | ml | 6 | Yes |
| 121E.1D5.7N.L1 | ICP standard according to USP 232 Parenteral Elemental Impurities: - 8 components; Cd 2.5mg/l ; Pb 5mg/l ; As 1.5mg/l ; Hg 1.5mg/l ; Mo 10mg/l ; Ni 50mg/l ; V 10mg/l ; Cu 100mg/l in HNO3 7% | 100 | ml | 6 | Yes |
| E13C.1D5.7N.L1 | ICP standard according to USP 232 Parenteral Elemental Impurities - 8 components; Cd 25mg/l ; Pb 5mg/l ; As 1.5mg/l ; Hg 15mg/l ; Mo 100mg/l ; Ni 500mg/l ; V 100mg/l ; Cu 1000mg/l in HNO3 7% | 100 | ml | 6 | Yes |

# Standards for Water Quality

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| SSW.L1 | ICP Water Quality standard - Synthetic Sea Water acc. to ASTM D665 : 10 components; NaCl 24.54g/l ; MgCl2x-6H2O 5.2g/l ; Na2SO4 4.09g/l ; CaCl2 1.16g/l ; KCl 0.69g/l ; NaHCO3 0.20g/l ; KBr 0.1g/l ; H3BO3 0.03g/l ; SrCl2 0.024g/l ; NaF 0.003g/l in H2O | 100 | ml | 12 | No |
| SSW.L5 | ICP Water Quality standard - Synthetic Sea Water acc. to ASTM D665 : 10 components; NaCl 24.54g/l ; MgCl2x-6H2O 5.2g/l ; Na2SO4 4.09g/l ; CaCl2 1.16g/l ; KCl 0.69g/l ; NaHCO3 0.20g/l ; KBr 0.1g/l ; H3BO3 0.03g/l ; SrCl2 0.024g/l ; NaF 0.003g/l in H2O | 500 | ml | 12 | No |
| QCCPAWater1.4L1 | ICP Water Quality standard 1 - 31 elements (supplied in two different solutions) - Ca 1mg/l ; Mg 0.2mg/l ; Na 0.5mg/l ; K 0.5mg/l ; P 0.5mg/l ; S 2mg/l ; Si 1mg/l ; Al 0.005mg/l ; Ag 0.005mg/l ; As 0.01mg/l ; B 0.05mg/l ; Ba 0.005mg/l ; Be 0.002mg/l ; Bi 0.01mg/l ; Cd 0.0005mg/l ; Co 0.002mg/l ; Cr 0.002mg/l ; Cu 0.005mg/l ; Fe 0.01mg/l ; Li 0.05mg/l ; Mn 0.002mg/l ; Mo 0.005mg/l ; Ni 0.005mg/l ; Pb 0.005mg/l ; Sb 0.01mg/l ; Se 0.01mg/l ; Sr 0.005mg/l ; Ti 0.002mg/l ; Tl 0.01mg/l ; V 0.005mg/l ; Zn 0.01mg/l in H2O/ tr. HNO3 | 800 | ml | 6 | Yes |
| QCCPAWater1.L1 | ICP Water Quality standard 1 - 31 elements (supplied in two different solutions) - Ca 1mg/l ; Mg 0.2mg/l ; Na 0.5mg/l ; K 0.5mg/l ; P 0.5mg/l ; S 2mg/l ; Si 1mg/l ; Al 0.005mg/l ; Ag 0.005mg/l ; As 0.01mg/l ; B 0.05mg/l ; Ba 0.005mg/l ; Be 0.002mg/l ; Bi 0.01mg/l ; Cd 0.0005mg/l ; Co 0.002mg/l ; Cr 0.002mg/l ; Cu 0.005mg/l ; Fe 0.01mg/l ; Li 0.05mg/l ; Mn 0.002mg/l ; Mo 0.005mg/l ; Ni 0.005mg/l ; Pb 0.005mg/l ; Sb 0.01mg/l ; Se 0.01mg/l ; Sr 0.005mg/l ; Ti 0.002mg/l ; Tl 0.01mg/l ; V 0.005mg/l ; Zn 0.01mg/l in H2O/ tr. HNO3 | 200 | ml | 6 | Yes |
| WCEBF.D005.005N.L1 | ICP Water Quality standard 1 - 31 elements (supplied in two different solutions) - Ca 1mg/l ; Mg 0.2mg/l ; Na 0.5mg/l ; K 0.5mg/l ; P 0.5mg/l ; S 2mg/l ; Si 1mg/l ; Al 0.005mg/l ; Ag 0.005mg/l ; As 0.01mg/l ; B 0.05mg/l ; Ba 0.005mg/l ; Be 0.002mg/l ; Bi 0.01mg/l ; Cd 0.0005mg/l ; Co 0.002mg/l ; Cr 0.002mg/l ; Cu 0.005mg/l ; Fe 0.01mg/l ; Li 0.05mg/l ; Mn 0.002mg/l ; Mo 0.005mg/l ; Ni 0.005mg/l ; Pb 0.005mg/l ; Sb 0.01mg/l ; Se 0.01mg/l ; Sr 0.005mg/l ; Ti 0.002mg/l ; Tl 0.01mg/l ; V 0.005mg/l ; Zn 0.01mg/l in HNO3 0.05% | 200 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| WCEBF.D05.05N.L1 | ICP Water Quality standard 2 - 31 elements (supplied in two different solutions) - (Ca 10 000 Ã‚µg/l): Ca 10mg/l ; Mg 2mg/l ; Na 5mg/l ; K 5mg/l ; P 5mg/l ; S 20mg/l ; Si 10mg/l ; Al 0.05mg/l ; Ag 0.05mg/l ; As 0.1mg/l ; B 0.5mg/l ; Ba 0.05mg/l ; Be 0.02mg/l ; Bi 0.1mg/l ; Cd 0.005mg/l ; Co 0.02mg/l ; Cr 0.02mg/l ; Cu 0.05mg/l ; Fe 0.1mg/l ; Li 0.5mg/l ; Mn 0.02mg/l ; Mo 0.05mg/l ; Ni 0.05mg/l ; Pb 0.05mg/l ; Sb 0.1mg/l ; Se 0.1mg/l ; Sr 0.05mg/l ; Ti 0.02mg/l ; Tl 0.1mg/l ; V 0.05mg/l ; Zn 0.1mg/l in HNO3 0.5% | 200 | ml | 6 | Yes |
| WCEBF.D5.5N.L1 | ICP Water Quality standard 2 - 31 elements (supplied in two different solutions) - Ca 100mg/l ; Mg 20mg/l ; Na 50mg/l ; K 50mg/l ; P 50mg/l ; S 200mg/l ; Si 100mg/l ; Al 0.5mg/l ; Ag 0.5mg/l ; As 1mg/l ; B 5mg/l ; Ba 0.5mg/l ; Be 0.2mg/l ; Bi 1mg/l ; Cd 0.05mg/l ; Co 0.2mg/l ; Cr 0.2mg/l ; Cu 0.5mg/l ; Fe 1mg/l ; Li 5mg/l ; Mn 0.2mg/l ; Mo 0.5mg/l ; Ni 0.5mg/l ; Pb 0.5mg/l ; Sb 1mg/l ; Se 1mg/l ; Sr 0.5mg/l ; Ti 0.2mg/l ; Tl 1mg/l ; V 0.5mg/l ; Zn 1mg/l in HNO3 5% | 200 | ml | 6 | Yes |
| QCCPAWater2.4L1 | ICP Water Quality standard 2 - 31 elements (supplied in two different solutions) - Ca 10mg/l ; Mg 2mg/l ; Na 5mg/l ; K 5mg/l ; P 5mg/l ; S 20mg/l ; Si 10mg/l ; Al 0.05mg/l ; Ag 0.05mg/l ; As 0.1mg/l ; B 0.5mg/l ; Ba 0.05mg/l ; Be 0.02mg/l ; Bi 0.1mg/l ; Cd 0.005mg/l ; Co 0.02mg/l ; Cr 0.02mg/l ; Cu 0.05mg/l ; Fe 0.1mg/l ; Li 0.5mg/l ; Mn 0.02mg/l ; Mo 0.05mg/l ; Ni 0.05mg/l ; Pb 0.05mg/l ; Sb 0.1mg/l ; Se 0.1mg/l ; Sr 0.05mg/l ; Ti 0.02mg/l ; Tl 0.1mg/l ; V 0.05mg/l ; Zn 0.1mg/l in H2O/ tr. HNO3 | 800 | ml | 6 | Yes |
| QCCPAWater2.L1 | ICP Water Quality standard 2 - 31 elements (supplied in two different solutions) - Ca 10mg/l ; Mg 2mg/l ; Na 5mg/l ; K 5mg/l ; P 5mg/l ; S 20mg/l ; Si 10mg/l ; Al 0.05mg/l ; Ag 0.05mg/l ; As 0.1mg/l ; B 0.5mg/l ; Ba 0.05mg/l ; Be 0.02mg/l ; Bi 0.1mg/l ; Cd 0.005mg/l ; Co 0.02mg/l ; Cr 0.02mg/l ; Cu 0.05mg/l ; Fe 0.1mg/l ; Li 0.5mg/l ; Mn 0.02mg/l ; Mo 0.05mg/l ; Ni 0.05mg/l ; Pb 0.05mg/l ; Sb 0.1mg/l ; Se 0.1mg/l ; Sr 0.05mg/l ; Ti 0.02mg/l ; Tl 0.1mg/l ; V 0.05mg/l ; Zn 0.1mg/l in H2O/ tr. HNO3 | 200 | ml | 6 | Yes |
| CPAWater3.L1 | ICP Water Quality standard 3 - 31 elements (supplied in two different solutions) - Ca 100mg/l ; Mg 20mg/l ; Na 5mg/l ; K 5mg/l ; P 5mg/l ; S 20mg/l ; Si 10mg/l ; Al 0.05mg/l ; Ag 0.05mg/l ; As 0.1mg/l ; B 0.5mg/l ; Ba 0.05mg/l ; Be 0.02mg/l ; Bi 0.1mg/l ; Cd 0.005mg/l ; Co 0.02mg/l ; Cr 0.02mg/l ; Cu 0.05mg/l ; Fe 0.1mg/l ; Li 0.5mg/l ; Mn 0.02mg/l ; Mo 0.05mg/l ; Ni 0.05mg/l ; Pb 0.05mg/l ; Sb 0.1mg/l ; Se 0.1mg/l ; Sr 0.05mg/l ; Ti 0.02mg/l ; Tl 0.1mg/l ; V 0.05mg/l ; Zn 0.1mg/l in HNO3 2% | 200 | ml | 6 | Yes |
| WCEBF.5.5N.L1 | ICP Water Quality standard 4 - 31 elements (supplied in two different solutions) - Ca 1000mg/l ; Mg 200mg/l ; Na 500mg/l ; K 500mg/l ; P 500mg/l ; S 2000mg/l ; Si 1000mg/l ; Al 5mg/l ; Ag 5mg/l ; As 10mg/l ; B 50mg/l ; Ba 5mg/l ; Be 2mg/l ; Bi 10mg/l ; Cd 0.5mg/l ; Co 2mg/l ; Cr 2mg/l ; Cu 5mg/l ; Fe 10mg/l ; Li 50mg/l ; Mn 2mg/l ; Mo 5mg/l ; Ni 5mg/l ; Pb 5mg/l ; Sb 10mg/l ; Se 10mg/l ; Sr 5mg/l ; Ti 2mg/l ; Tl 10mg/l ; V 5mg/l ; Zn 10mg/l in HNO3 5% | 200 | ml | 6 | Yes |
| CPAWater4.L1 | ICP Water Quality standard 4 - 31 elements (supplied in two different solutions) - Ca 1000mg/l ; Mg 200mg/l ; Na 50mg/l ; K 50mg/l ; P 50mg/l ; S 200mg/l ; Si 100mg/l ; Al 0.5mg/l ; Ag 0.5mg/l ; As 1mg/l ; B 5mg/l ; Ba 0.5mg/l ; Be 0.2mg/l ; Bi 1mg/l ; Cd 0.05mg/l ; Co 0.2mg/l ; Cr 0.2mg/l ; Cu 0.5mg/l ; Fe 1mg/l ; Li 5mg/l ; Mn 0.2mg/l ; Mo 0.5mg/l ; Ni 0.5mg/l ; Pb 0.5mg/l ; Sb 1mg/l ; Se 1mg/l ; Sr 0.5mg/l ; Ti 0.2mg/l ; Tl 1mg/l ; V 0.5mg/l ; Zn 1mg/l in HNO3 2% | 200 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| CPAWater5.L1 | ICP Water Quality standard 5 - 31 elements (supplied in two different solutions) - Ca 2000mg/l ; Mg 400mg/l ; Na 100mg/l ; K 100mg/l ; P 100mg/l ; S 400mg/l ; Si 200mg/l ; Al 1mg/l ; Ag 1mg/l ; As 2mg/l ; B 10mg/l ; Ba 1mg/l ; Be 0.4mg/l ; Bi 2mg/l ; Cd 0.1mg/l ; Co 0.4mg/l ; Cr 0.4mg/l ; Cu 1mg/l ; Fe 2mg/l ; Li 10mg/l ; Mn 0.4mg/l ; Mo 1mg/l ; Ni 1mg/l ; Pb 1mg/l ; Sb 2mg/l ; Se 2mg/l ; Sr 1mg/l ; Ti 0.4mg/l ; Tl 2mg/l ; V 1mg/l ; Zn 2mg/l in HNO3 5% | 200 | ml | 6 | Yes |
| WCEBF.10.5N.L1 | ICP Water Quality standard 5 - 31 elements (supplied in two different solutions) - Ca 2000mg/l ; Mg 400mg/l ; Na 1000mg/l ; K 1000mg/l ; P 1000mg/l ; S 4000mg/l ; Si 2000mg/l ; Al 10mg/l ; Ag 10mg/l ; As 20mg/l ; B 100mg/l ; Ba 10mg/l ; Be 4mg/l ; Bi 20mg/l ; Cd 1mg/l ; Co 4mg/l ; Cr 4mg/l ; Cu 10mg/l ; Fe 20mg/l ; Li 100mg/l ; Mn 4mg/l ; Mo 10mg/l ; Ni 10mg/l ; Pb 10mg/l ; Sb 20mg/l ; Se 20mg/l ; Sr 10mg/l ; Ti 4mg/l ; Tl 20mg/l ; V 10mg/l ; Zn 20mg/l in HNO3 5% | 200 | ml | 6 | Yes |
| D0BC.20.5N.L1 | TCLP Standard 2 - 1 component; Hg 20mg/l in HNO3 5% | 100 | ml | 6 | Yes |

# ICP Calibration Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| F4AD.1K.W.L1 | ICP Calibration Standard - 2 components; 1000mg/l each of P ; S in H2O | 100 | ml | 12 | Yes |
| F4AD.1K.W.L5 | ICP Calibration Standard - 2 components; 1000mg/l each of P ; S in H2O | 500 | ml | 12 | Yes |
| F4AD.K1.W.L1 | ICP Calibration Standard - 2 components; 100mg/l each of P ; S in H2O | 100 | ml | 12 | Yes |
| F4AD.K1.W.L5 | ICP Calibration Standard - 2 components; 100mg/l each of P ; S in H2O | 500 | ml | 12 | Yes |
| 1B92.D2.2N.L1 | ICP Calibration Standard - 2 components; 200ug/l each of Cd ; Pb in HNO3 2% | 100 | ml | 4 | Yes |
| 1B92.D2.2N.L5 | ICP Calibration Standard - 2 components; 200ug/l each of Cd ; Pb in HNO3 2% | 500 | ml | 4 | Yes |
| C56D.K1.5C.L1 | ICP Calibration Standard - 3 components; 100mg/l each of Au ; Pd ; Pt in HCl 5% | 100 | ml | 12 | Yes |
| 91C8.1K.2N.L1 | ICP Calibration Standard - 4 components; 1000mg/l each of Ca ; Mg ; K ; Na in HNO3 2% | 100 | ml | 12 | Yes |
| 91C8.1K.2N.L5 | ICP Calibration Standard - 4 components; 1000mg/l each of Ca ; Mg ; K ; Na in HNO3 2% | 500 | ml | 12 | Yes |
| M591930.L1 | ICP Calibration Standard - 4 components; K 200mg/l ; Mg 400mg/l ; Na 1000mg/l ; Ca 2000mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 8E66.K1.5N.L1 | ICP Calibration Standard - Toxic Elements - 7 components; 100mg/l each of As ; Be ; Cd ; Ni ; Pb ; Se ; Tl in HNO3 5% | 100 | ml | 12 | Yes |
| A2E5.K1.5C.L1 | ICP Calibration Standard - 8 components; 100mg/l each of Au ; Ir ; Os ; Pd ; Pt ; Re ; Rh ; Ru in HCl 5% | 100 | ml | 12 | Yes |
| 1E1E.1.2N.L1 | ICP Calibration Standard - 10 components; P 10mg/l ; Ni 5mg/l ; K 5mg/l ; Al 1mg/l ; Cu 1mg/l ; Mn 1mg/l ; Ba 0.2mg/l ; Ca 0.2mg/l ; Mg 0.2mg/l ; Zn 0.2mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| F8AA.30.2N.L1 | ICP Calibration Standard - 12 components; Ca 3000mg/l ; Mg 450mg/l ; K 1200mg/l ; Na 3000mg/l ; SO42- 3000mg/l ; P 234.8mg/l ; Fe 30mg/l ; Mn 30mg/l ; Cu 15mg/l ; Zn 15mg/l ; B 30mg/l ; Mo 6mg/l in HNO3 2% | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| F8AA.30.2N.L5 | ICP Calibration Standard - 12 components; Ca 3000mg/l ; Mg 450mg/l ; K 1200mg/l ; Na 3000mg/l ; SO42- 3000mg/l ; P 234.8mg/l ; Fe 30mg/l ; Mn 30mg/l ; Cu 15mg/l ; Zn 15mg/l ; B 30mg/l ; Mo 6mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| 9C24.30.2N.L1 | ICP Calibration Standard - 12 components; Ca 3000mg/l ; Mg 450mg/l ; K 1200mg/l ; Na 150mg/l ; SO42- 3000mg/l ; P 234.8mg/l ; Fe 30mg/l ; Mn 30mg/l ; Cu 15mg/l ; Zn 15mg/l ; B 30mg/l ; Mo 6mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| 9C24.30.2N.L5 | ICP Calibration Standard - 12 components; Ca 3000mg/l ; Mg 450mg/l ; K 1200mg/l ; Na 150mg/l ; SO42- 3000mg/l ; P 234.8mg/l ; Fe 30mg/l ; Mn 30mg/l ; Cu 15mg/l ; Zn 15mg/l ; B 30mg/l ; Mo 6mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| 9E24.D02.5N.L1 | ICP Calibration Standard - 13 components; Ca 100mg/l ; Mg 25mg/l ; Cu 0.2mg/l ; Zn 0.2mg/l ; Mn 0.2mg/l ; Fe 0.1mg/l ; Na 50mg/l ; K 25mg/l ; Al 0.02mg/l ; Ba 0.2mg/l ; V 0.2mg/l ; Mo 0.2mg/l ; Be 0.2mg/l in HNO3 5% | 100 | ml | 4 | Yes |
| 9E24.D02.5N.L5 | ICP Calibration Standard - 13 components; Ca 100mg/l ; Mg 25mg/l ; Cu 0.2mg/l ; Zn 0.2mg/l ; Mn 0.2mg/l ; Fe 0.1mg/l ; Na 50mg/l ; K 25mg/l ; Al 0.02mg/l ; Ba 0.2mg/l ; V 0.2mg/l ; Mo 0.2mg/l ; Be 0.2mg/l in HNO3 5% | 500 | ml | 4 | Yes |
| MU01060100 | ICP Calibration Standard - 16 components; Al 100mg/l ; Ba 5mg/l ; Be 2mg/l ; B 20mg/l ; Cd 20mg/l ; Cr 20mg/l ; Co 50mg/l ; Cu 20mg/l ; Fe 20mg/l ; Pb 200mg/l ; Mn 10mg/l ; Ni 50mg/l ; Se 5mg/l ; Tl 100mg/l ; V 50mg/l ; Zn 50mg/l in HNO3 10% | 100 | ml | 6 | Yes |
| 006B.2.2N.L1 | ICP Calibration Standard - 17 components; Ag 2mg/l ; Al 20mg/l ; As 2mg/l ; Ba 5mg/l ; Cd 0.2mg/l ; Cr 3mg/l ; Cu 4mg/l ; Fe 20mg/l ; Mn 10mg/l ; Mo 1mg/l ; Ni 2mg/l ; Pb 5mg/l ; Se 0.5mg/l ; Sb 2mg/l ; Sn 5mg/l ; Tl 2mg/l ; Zn 10mg/l in HNO3 2% | 100 | ml | 4 | Yes |
| 006B.2.2N.L5 | ICP Calibration Standard - 17 components; Ag 2mg/l ; Al 20mg/l ; As 2mg/l ; Ba 5mg/l ; Cd 0.2mg/l ; Cr 3mg/l ; Cu 4mg/l ; Fe 20mg/l ; Mn 10mg/l ; Mo 1mg/l ; Ni 2mg/l ; Pb 5mg/l ; Se 0.5mg/l ; Sb 2mg/l ; Sn 5mg/l ; Tl 2mg/l ; Zn 10mg/l in HNO3 2% | 500 | ml | 4 | Yes |
| M592020.L1 | ICP Calibration Standard - 17 components; Be 10mg/l ; Cd 10mg/l ; Co 10mg/l ; Mn 10mg/l ; Cr 20mg/l ; Cu 20mg/l ; Ni 20mg/l ; Al 40mg/l ; As 40mg/l ; Ba 40mg/l ; Pb 40mg/l ; V 40mg/l ; B 100mg/l ; Fe 100mg/l ; Se 100mg/l ; Tl 100mg/l ; Zn 100mg/l in HNO3 10% | 100 | ml | 12 | Yes |
| B09A.1K.4N.L1 | ICP Calibration Standard - 21 components; 1000mg/l each of Ag ; As ; Al ; B ; Ba ; Bi ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; Li ; Mn ; Ni ; Pb ; Sr ; Tl ; Zn ; Si in HNO3 4% | 100 | ml | 12 | Yes |
| B09A.1K.4N.L5 | ICP Calibration Standard - 21 components; 1000mg/l each of Ag ; As ; Al ; B ; Ba ; Bi ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; Li ; Mn ; Ni ; Pb ; Sr ; Tl ; Zn ; Si in HNO3 4% | 500 | ml | 12 | Yes |
| BE89.K1.5N.L1 | ICP Calibration Standard - 21 components; 100mg/l each of Al ; As ; B ; Ca ; Cd ; Cr ; Co ; Cu ; Fe ; K ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; P ; Ti ; Zn ; Si ; S in HNO3 5% | 100 | ml | 12 | Yes |
| BE89.K1.5N.L5 | ICP Calibration Standard - 21 components; 100mg/l each of Al ; As ; B ; Ca ; Cd ; Cr ; Co ; Cu ; Fe ; K ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; P ; Ti ; Zn ; Si ; S in HNO3 5% | 500 | ml | 12 | Yes |
| M52B5.K1.5N.L05 | ICP Calibration Standard - 22 components - 100 mg/l each of As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, all in 5% HNO3 | 50 | ml | 12 | Yes |
| M52B5.K1.5N.L1 | ICP Calibration Standard - 22 components - 100 mg/l each of As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, all in 5% HNO3 | 100 | ml | 12 | Yes |
| M52B5.K1.5N.L5 | ICP Calibration Standard - 22 components - 100 mg/l each of As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, all in 5% HNO3 | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MU01100100 | ICP Calibration Standard - 26 components; 100ppm each of Al ; As ; Ba ; Be ; Bi ; B ; Cd ; Ca ; Cr ; Co ; Cu ; Fe ; Pb ; Li ; Mg ; Mn ; Mo ; Ni ; K ; Se ; Na ; Sr ; Tl ; Ti ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| 0D7B.K1.5NtrF.L1 | ICP Calibration Standard - 26 components; Al 100ug/ml ; Sb 100ug/ml ; As 100ug/ml ; Ba 100ug/ml ; Be 100ug/ml ; B 100ug/ml ; Cd 100ug/ml ; Ca 100ug/ml ; Cr 100ug/ml ; Co 100ug/ml ; Cu 100ug/ml ; Fe 100ug/ml ; Pb 100ug/ml ; Mg 100ug/ml ; Mn 100ug/ml ; Mo 100ug/ml ; Ni 100ug/ml ; K 1000ug/ml ; Se 100ug/ml ; Si 50ug/ml ; Ag 100ug/ml ; Na 100ug/ml ; Tl 100ug/ml ; Ti 100ug/ml ; V 100ug/ml ; Zn 100ug/ml in HNO3 5% ; HF tr | 100 | ml | 6 | Yes |
| 0D7B.K1.5NtrF.L25 | ICP Calibration Standard - 26 components; Al 100ug/ml ; Sb 100ug/ml ; As 100ug/ml ; Ba 100ug/ml ; Be 100ug/ml ; B 100ug/ml ; Cd 100ug/ml ; Ca 100ug/ml ; Cr 100ug/ml ; Co 100ug/ml ; Cu 100ug/ml ; Fe 100ug/ml ; Pb 100ug/ml ; Mg 100ug/ml ; Mn 100ug/ml ; Mo 100ug/ml ; Ni 100ug/ml ; K 1000ug/ml ; Se 100ug/ml ; Si 50ug/ml ; Ag 100ug/ml ; Na 100ug/ml ; Tl 100ug/ml ; Ti 100ug/ml ; V 100ug/ml ; Zn 100ug/ml in HNO3 5% ; HF tr | 250 | ml | 6 | Yes |
| 0D7B.K1.5NtrF.L5 | ICP Calibration Standard - 26 components; Al 100ug/ml ; Sb 100ug/ml ; As 100ug/ml ; Ba 100ug/ml ; Be 100ug/ml ; B 100ug/ml ; Cd 100ug/ml ; Ca 100ug/ml ; Cr 100ug/ml ; Co 100ug/ml ; Cu 100ug/ml ; Fe 100ug/ml ; Pb 100ug/ml ; Mg 100ug/ml ; Mn 100ug/ml ; Mo 100ug/ml ; Ni 100ug/ml ; K 1000ug/ml ; Se 100ug/ml ; Si 50ug/ml ; Ag 100ug/ml ; Na 100ug/ml ; Tl 100ug/ml ; Ti 100ug/ml ; V 100ug/ml ; Zn 100ug/ml in HNO3 5% ; HF tr | 500 | ml | 6 | Yes |
| M592090.L1 | ICP Calibration Standard - 27 components; Al 10mg/l ; Ba 10mg/l ; Be 10mg/l ; Bi 10mg/l ; Cd 10mg/l ; Ca 100mg/l ; Cs 10mg/l ; Cr 10mg/l ; Co 10mg/l ; Cu 10mg/l ; Ga 10mg/l ; In 10mg/l ; Fe 100mg/l ; Pb 10mg/l ; Li 10mg/l ; Mg 10mg/l ; Mn 10mg/l ; Mo 10mg/l ; Ni 10mg/l ; K 100mg/l ; Rb 10mg/l ; Ag 10mg/l ; Na 100mg/l ; Sr 10mg/l ; Tl 10mg/l ; V 10mg/l ; Zn 10mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| MB56A.K1.5N.L05 | ICP Calibration Standard - 28 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, in HNO3 5% | 50 | ml | 12 | Yes |
| MB56A.K1.5N.L1 | ICP Calibration Standard - 28 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, in HNO3 5% | 100 | ml | 12 | Yes |
| MB56A.K1.5N.L5 | ICP Calibration Standard - 28 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn, in HNO3 5% | 500 | ml | 12 | Yes |
| 0C6A.K1.5N.L1 | ICP Calibration Standard - 32 components; 100mg/l each of Ag ; Al ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; Ge ; In ; K ; Li ; Mg ; Mn ; Mo ; Na ; Nb ; Ni ; P ; Pb ; Re ; Sb ; Si ; Sn ; Ta ; Ti ; V ; W ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| 0C6A.K1.5N.L5 | ICP Calibration Standard - 32 components; 100mg/l each of Ag ; Al ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; Ge ; In ; K ; Li ; Mg ; Mn ; Mo ; Na ; Nb ; Ni ; P ; Pb ; Re ; Sb ; Si ; Sn ; Ta ; Ti ; V ; W ; Zn in HNO3 5% | 500 | ml | 12 | Yes |
| M8A96.K1.5N.L05 | ICP Calibration Standard - 33 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn in HNO3 5% | 50 | ml | 12 | Yes |
| M8A96.K1.5N.L1 | ICP Calibration Standard - 33 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn in HNO3 5% | 100 | ml | 12 | Yes |
| M8A96.K1.5N.L5 | ICP Calibration Standard - 33 components - 100 mg/l Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn in HNO3 5% | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 3256.10.2N.L1 | ICP Calibration Standard - 36 components; 10mg/l each of Ag ; Al ; As ; Ba ; B ; Ca ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Eu ; Fe ; Gd ; Ho ; K ; La ; Li ; Lu ; Mg ; Mn ; Na ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; V ; Zn in HNO3 2% | 100 | ml | 6 | Yes |
| 3256.10.2N.L5 | ICP Calibration Standard - 36 components; 10mg/l each of Ag ; Al ; As ; Ba ; B ; Ca ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Eu ; Fe ; Gd ; Ho ; K ; La ; Li ; Lu ; Mg ; Mn ; Na ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; V ; Zn in HNO3 2% | 500 | ml | 6 | Yes |
| 7027.K1.5N.L1 | MISA Standard 1 - Rare Earth Metals - 18 components; 100mg/l each of Ce ; Dy ; Er ; Eu ; Gd ; Ho ; La ; Lu ; Nd ; Pr ; Sc ; Sm ; Tb ; Th ; Tm ; U ; Y ; Yb in HNO3 5% | 100 | ml | 12 | Yes |
| 397C.K1.10C.L1 | MISA Standard 2 - Precious Metals - 6 components; 100mg/l each of Au ; Ir ; Pd ; Pt ; Rh ; Ru in HCl 10% | 100 | ml | 12 | Yes |
| AA6C.K1.10C.L1 | MISA Standard 3 - Tellurium - 1 component; Te 100mg/l in HCl 10% | 100 | ml | 12 | Yes |
| E579.K1.10N.L1 | MISA Standard 6 - Transition Metals - 13 components; 100mg/l each of Cd ; Co ; Cu ; Cr ; Fe ; Pb ; Mn ; Hg ; Ni ; Ag ; Tl ; V ; Zn in HNO3 10% | 100 | ml | 12 | Yes |
| 32D7.K1.5NF.L1 | MISA Standard 5 - Fluoride Soluble Group 15 components; 100mg/l each of Sb ; B ; Ge ; Hf ; Mo ; Nb ; P ; Re ; Si ; S ; Ta ; Sn ; Ti ; W ; Zr in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 942A.K1.10N.L1 | MISA Standard 4 - Alkali, Alkaline Earth, Non-Transition Group - 16 components; 100mg/l each of Al ; As ; Ba ; Bi ; Be ; Ca ; Cs ; Ga ; In ; Li ; Mg ; K ; Rb ; Se ; Na ; Sr in HNO3 10% | 100 | ml | 12 | Yes |
| FC4C.5K.5N.L1 | Solids 1B CCV Solution for ICP-OES - 6 components; Al 5000mg/l ; Ca 5000mg/l ; Fe 5000mg/l ; Mg 5000mg/l ; Na 5000mg/l ; K 2000mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| F679.1K.5N.L1 | Solids Mix 3A solution for ICP-OES - 11 components; Mn 2500mg/l ; Zn 2500mg/l ; As 1000mg/l ; Co 1000mg/l ; Cr 1000mg/l ; Cu 1000mg/l ; Ni 1000mg/l ; Pb 1000mg/l ; V 1000mg/l ; Be 100mg/l ; Cd 100mg/l in HNO3 5% | 100 | ml | 12 | Yes |

## Quality Control Standards for ICP

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| F9B8.1K.2N.L1 | ICP QC standard 6 - 4 components; 1000mg/l each of Ba ; Ca ; Mg ; Sr in HNO3 2% | 100 | ml | 12 | Yes |
| M397C.1.2C.L1 | ICP QC standard - 6 components - 1 mg/l each of: Au, Ir, Pd, Pt, Rh, Ru all in 2% HCl | 100 | ml | 6 | Yes |
| M397C.1.2C.L5 | ICP QC standard - 6 components - 1 mg/l each of: Au, Ir, Pd, Pt, Rh, Ru all in 2% HCl | 500 | ml | 6 | Yes |
| 01EC.K1.5N.L1 | ICP QC standard 2R - 7 components -100mg/l each of Al ; Ba ; B ; K ; Si ; Ag ; Na in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| CF34.K1.5N.L1 | ICP QC standard 3 - 15 components - 100mg/l each of Al ; Ba ; Cd ; Ca ; Cr ; Co ; Cu ; Fe ; Pb ; Mg ; Mn ; Ni ; Na ; Ti ; Zn in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| M52B5.1.5N.L1 | ICP QC standard - 22 components - 1 mg/l each of: As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn 1mg/l; all in 5% HNO3 | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M52B5.1.5N.L5 | ICP QC standard - 22 components - 1 mg/l each of: As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn 1mg/l; all in 5% HNO3 | 500 | ml | 6 | Yes |
| B0D3.K1.5N.L1 | ICP QC standard 1 - 23 components - 100mg/l each of Sb ; As ; Be ; Cd ; Ca ; Cr ; Co ; Cu ; Fe ; Pb ; Li ; Mg ; Mn ; Mo ; Ni ; P ; Se ; Sr ; Sn ; Tl ; Ti ; V ; Zn in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 64F7.10.2N.L1 | ICP QC standard - 25 components -10mg/l each of Ag ; Al ; As ; Ba ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; Sb ; Se ; Th ; Tl ; U ; V ; Zn in HNO3 2% | 100 | ml | 6 | Yes |
| MB56A.1.2N.L1 | ICP QC standard - 28 components - 1mg/l each of Al ; Ag ; As ; B ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Li ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; Sb ; Se ; Sr ; Ti ; Tl ; V ; Zn in HNO3 2% | 100 | ml | 6 | Yes |
| MB56A.1.2N.L5 | ICP QC standard - 28 components - 1mg/l each of Al ; Ag ; As ; B ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Li ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; Sb ; Se ; Sr ; Ti ; Tl ; V ; Zn in HNO3 2% | 500 | ml | 6 | Yes |
| M8A96.1.5N.L1 | ICP QC standard - 33 components - 1 mg/l each of Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn, in HNO3 5% | 100 | ml | 6 | Yes |
| M8A96.1.5N.L5 | ICP QC standard - 33 components - 1 mg/l each of Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn, in HNO3 5% | 500 | ml | 6 | Yes |

# Elemental Impurities acc to ICH

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| RM006928L1 | USP 232/ ICH Q3D Elemental Impurities Standard 1 - 4 components; Cd 5ug/ml ; Pb 5ug/ml ; As 15ug/ml ; Hg 30ug/ml in HNO3 2% | 100 | ml | 12 | Yes |
| RM015155L1 | USP 232/ ICH Q3D Elemental Impurities Standard 2-1: 6 components; Co 50ug/ml ; V 100ug/ml ; Ni 200ug/ml ; Tl 8ug/ml ; Se 150ug/ml ; Ag 150ug/ml in HNO3 2% | 100 | ml | 12 | Yes |
| RM009107L1 | ICH/USP Oral Target Elements Standard C - 7 components; 100mg/l each of Au ; Ir ; Os ; Pd ; Pt ; Rh ; Ru in HCl 15% | 100 | ml | 12 | Yes |
| RM016220L1 | USP 232/ ICH Q3D Elemental Impurities Standard 3 - 7 components; Li 550ug/ml ; Sb 1200ug/ml ; Ba 1400ug/ml ; Mo 3000ug/ml ; Cu 3000ug/ml ; Sn 6000ug/ml ; Cr 11000ug/ml in HNO3 5% ; HF 0.1% | 100 | ml | 12 | Yes |
| RM000168L1 | Elemental Impurities acc. to ICH - Q3D - Oral Concentrations Standard 3:7 components; 10ug/g each of Au ; Pd ; Ir ; Os ; Rh ; Ru ; Pt in HCl 5% | 100 | ml | 6 | Yes |
| RM000174L1 | ICH - Q3D - Inhalation Concentrations Standard 3: 7 components; 0.1ug/g each of Au ; Pd ; Ir ; Os ; Rh ; Ru ; Pt in HCl 5% | 100 | ml | 6 | Yes |
| RM000765L1 | ICH Q3D parenteral, Standard 2 - 7 components; Au 100mg/l ; Ir 10mg/l ; Os 10mg/l ; Pd 10mg/l ; Pt 10mg/l ; Rh 10mg/l ; Ru 10mg/l in HCl 10% | 100 | ml | 6 | Yes |
| RM009912L1 | ICH Q3D parenteral, Standard 3 - 7 components; Ba 70mg/l ; Cr 110mg/l ; Cu 30mg/l ; Li 25mg/l ; Mo 150mg/l ; Sb 9mg/l ; Sn 60mg/l in HNO3 5% ; HF 0.2% | 100 | ml | 6 | Yes |
| RM000172L1 | ICH - Q3D - Inhalation Concentrations Standard 1: 10 components; Cd 0.2ug/g ; Pb 0.5ug/g ; As 0.2ug/g ; Hg 0.1ug/g ; Co 0.3ug/g ; V 0.1ug/g ; Ni 0.5ug/g ; Tl 0.8ug/g ; Se 13ug/g ; Ag 0.7ug/g in HNO3 2% | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| RM000165L1 | ICH - Q3D - Oral Concentrations Standard 1: 10 components; Cd 0.5ug/g ; Pb 0.5ug/g ; As 1.5ug/g ; Hg 3ug/g ; Co 5ug/g ; V 10ug/g ; Ni 20ug/g ; Tl 0.8ug/g ; Se 15ug/g ; Ag 15ug/g in HNO3 2% | 100 | ml | 6 | Yes |
| RM000169L1 | ICH - Q3D - Parenteral Concentrations Standard 1:10 components; Cd 0.2ug/g ; Pb 0.5ug/g ; As 1.5ug/g ; Hg 0.3ug/g ; Co 0.5ug/g ; V 1ug/g ; Ni 2ug/g ; Tl 0.8ug/g ; Se 8ug/g ; Ag 1ug/g in HNO3 2% | 100 | ml | 6 | Yes |
| RM009830L1 | ICH Q3D parenteral, Standard 1 - 10 components; Ag 10mg/l ; As 15mg/l ; Cd 2mg/l ; Co 5mg/l ; Hg 3mg/l ; Ni 20mg/l ; Pb 5mg/l ; Se 80mg/l ; Tl 8mg/l ; V 10mg/l in HNO3 12% | 100 | ml | 6 | Yes |

# ICP-MS Standards

# ICP-MS Standards

All ICP-MS Standards produced by CPAchem use high-purity metals or salts in sub-boiling distilled acids. The Standards are produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

## ICP-MS Single-Element Standards

*10 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M401.2NP.L1 | Silver Ag - 10 mg/l in HNO3 for ICP-MS (Ag 99.999%) | 100 | ml | 12 | Yes |
| M402.2NP.L1 | Aluminium Al - 10 mg/l in HNO3 for ICP-MS ( Al(NO3)3 - 99.999%) | 100 | ml | 12 | Yes |
| M403.2NP.L1 | Arsenic As - 10 mg/l in HNO3 for ICP-MS ( As 99.9995%) | 100 | ml | 12 | Yes |
| M404.2CP.L1 | Gold Au - 10 mg/l in HCl for ICP-MS (Au 99.999%) | 100 | ml | 12 | Yes |
| M405.W.L1 | Boron B - 10 mg/l in H2O for ICP-MS ((NH4)2B4O7 99.999%) | 100 | ml | 12 | Yes |
| M406.2NP.L1 | Barium Ba - 10 mg/l in HNO3 for ICP-MS (BaCO3 99.999%) | 100 | ml | 12 | Yes |
| M407.2NP.L1 | Beryllium Be - 10 mg/l in HNO3 for ICP-MS (Be4O(C2H3O2)6,99.999%) | 100 | ml | 12 | Yes |
| M408.2NP.L1 | Bismuth Bi - 10 mg/l in HNO3 for ICP-MS (Bi 99.999%) | 100 | ml | 12 | Yes |
| M409.2NP.L1 | Calcium Ca - 10 mg/l in HNO3 for ICP-MS (CaCO3 99.999%) | 100 | ml | 12 | Yes |
| M410.2NP.L1 | Cadmium Cd - 10 mg/l in HNO3 for ICP-MS (Cd 99.9999%) | 100 | ml | 12 | Yes |
| M411.2NP.L1 | Cerium Ce - 10 mg/l in 2% HNO3 for ICP-MS (Ce(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M412.2NP.L1 | Cobalt Co - 10 mg/l in HNO3 for ICP-MS (Co 99.999%) | 100 | ml | 12 | Yes |
| M413.2NP.L1 | Chromium Cr - 10 mg/l in HNO3 for ICP-MS (Cr(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M414.2NP.L1 | Cesium Cs - 10 mg/l in HNO3 for ICP-MS (CsNO3 99.999%) | 100 | ml | 12 | Yes |
| M415.2NP.L1 | Copper Cu - 10 mg/l in HNO3 for ICP-MS (Cu 99.999%) | 100 | ml | 12 | Yes |
| M416.2NP.L1 | Dysprosium Dy - 10 mg/l in 2% HNO3 for ICP-MS (Dy2O3 99.999%) | 100 | ml | 12 | Yes |
| M417.2NP.L1 | Erbium Er - 10 mg/l in 2% HNO3 for ICP-MS (Er2O3 99.999%) | 100 | ml | 12 | Yes |
| M418.2NP.L1 | Europium Eu - 10 mg/l in 2% HNO3 for ICP-MS (Eu2O3 99.99%) | 100 | ml | 12 | Yes |
| M419.2NP.L1 | Iron Fe - 10 mg/l in HNO3 for ICP-MS (Fe(NO3)3, 99.9995%) | 100 | ml | 12 | Yes |
| M420.2NP.L1 | Gallium Ga - 10 mg/l in HNO3 for ICP-MS (Ga 99.999%) | 100 | ml | 12 | Yes |
| M421.2NP.L1 | Gadolinium Gd - 10 mg/l in 2% HNO3 for ICP-MS (Gd2O3 99.999%) | 100 | ml | 12 | Yes |
| M422.2N02FP.L1 | Germanium Ge - 10 mg/l in HNO3/tr.HF for ICP-MS (Ge 99.999%) | 100 | ml | 12 | Yes |
| M423.2N05FP.L1 | Hafnium Hf - 10 mg/l in 2% HNO3/0.5% HF for ICP-MS (HfO2 99.995%) | 100 | ml | 12 | Yes |
| M424.5NP.L1 | Mercury Hg - 10 mg/l in 5% HNO3 for ICP-MS (HgO 99.999+%) | 100 | ml | 12 | Yes |
| M425.2NP.L1 | Holmium Ho - 10 mg/l in HNO3 for ICP-MS (Ho03 99.99%) | 100 | ml | 12 | Yes |
| M426.2NP.L1 | Indium In - 10 mg/l in HNO3 for ICP-MS (In 99.999%) | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M427.2CP.L1 | Iridium Ir - 10 mg/l in 2% HCl for ICP-MS ((NH4)2IrCl6 99.99%) | 100 | ml | 12 | Yes |
| M428.2NP.L1 | Potassium K - 10 mg/l in HNO3 for ICP-MS (KNO3 99.999%) | 100 | ml | 12 | Yes |
| M429.2NP.L1 | Lanthanum La - 10 mg/l in HNO3 for ICP-MS (La2O3 99.999%) | 100 | ml | 12 | Yes |
| M430.2NP.L1 | Lithium Li - 10 mg/l in HNO3 for ICP-MS (Li2CO3 99.999%) | 100 | ml | 12 | Yes |
| M431.2NP.L1 | Lutetium Lu - 10 mg/l in HNO3 for ICP-MS (Lu2O3 99.99%) | 100 | ml | 12 | Yes |
| M432.2NP.L1 | Magnesium Mg - 10 mg/l in HNO3 for ICP-MS (Mg(NO3)2, 99.999%) | 100 | ml | 12 | Yes |
| M433.2NP.L1 | Manganese Mn - 10 mg/l in HNO3 for ICP-MS (Mn(NO3)2, 99.999%) | 100 | ml | 12 | Yes |
| M434.W.L1 | Molybdenum Mo - 10 mg/l in H2O for ICP-MS ((NH4)2MoO4, 99.999%) | 100 | ml | 12 | Yes |
| M435.2NP.L1 | Sodium Na - 10 mg/l in HNO3 for ICP-MS (NaNO3 99.999%) | 100 | ml | 12 | Yes |
| M436.2N05FP.L1 | Niobium Nb - 10 mg/l in 2% HNO3/ 0.5% HF for ICP-MS (Nb 99.9+%) | 100 | ml | 12 | Yes |
| M437.2NP.L1 | Neodymium Nd - 10 mg/l in 2% HNO3 for ICP-MS (Nd2O3 99.999%) | 100 | ml | 12 | Yes |
| M438.2NP.L1 | Nickel Ni - 10 mg/l in HNO3 for ICP-MS (Ni(NO3)2 99.9998%) | 100 | ml | 12 | Yes |
| M440.W.L1 | Phosphorus P -10 mg/l in H2O for ICP-MS (NH4H2PO4 99.999%) | 100 | ml | 12 | Yes |
| M441.2NP.L1 | Lead Pb - 10 mg/l in HNO3 for ICP-MS (Pb(NO3)2 99.9995%) | 100 | ml | 12 | Yes |
| M442.2NP.L1 | Palladium Pd - 10 mg/l in 2% HNO3 for ICP-MS (Pd 99.999%) | 100 | ml | 12 | Yes |
| M443.2NP.L1 | Praseodymium Pr - 10 mg/l in HNO3 for ICP-MS (Pr6O11 99.999%) | 100 | ml | 12 | Yes |
| M444.2CP.L1 | Platinum Pt - 10 mg/l in HCl for ICP-MS (Pt 99.999%) | 100 | ml | 12 | Yes |
| M445.2NP.L1 | Rubidium Rb - 10 mg/l in 2% HNO3 for ICP-MS (RbNO3 99.99%) | 100 | ml | 12 | Yes |
| M446.2NP.L1 | Rhenium Re - 10 mg/l in HNO3 for ICP-MS (Re 99.995+%) | 100 | ml | 12 | Yes |
| M447.2CP.L1 | Rhodium Rh - 10 mg/l in 2% HCl for ICP-MS (RhCl3 99.99%) | 100 | ml | 12 | Yes |
| M448.2CP.L1 | Ruthenium Ru - 10 mg/l in 2% HCl for ICP-MS (RuCl3 99.99%) | 100 | ml | 12 | Yes |
| M449.W.L1 | Sulphur S - 10 mg/l in H2O for ICP-MS ((NH4)2SO4 99.999%) | 100 | ml | 12 | Yes |
| M450.2N05FP.L1 | Antimony Sb - 10 mg/l in HNO3/tr.HF for ICP-MS (Sb 99.999%) | 100 | ml | 12 | Yes |
| M451.2NP.L1 | Scandium Sc - 10 mg/l in HNO3 for ICP-MS (Sc(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M452.2NP.L1 | Selenium Se - 10 mg/l in HNO3 for ICP-MS (Se 99.999%) | 100 | ml | 12 | Yes |
| M453.W.L1 | Silicon Si - 10 mg/l in H2O for ICP-MS ((NH4)2SiF6 99.999%) | 100 | ml | 12 | Yes |
| M454.2NP.L1 | Samarium Sm - 10 mg/l in 2% HNO3 for ICP-MS (Sm2O3 99.999%) | 100 | ml | 12 | Yes |
| M455.1N05FP.L1 | Tin Sn - 10 mg/l in HNO3/tr.HF for ICP-MS (Sn 99.9999%) | 100 | ml | 12 | Yes |
| M456.2NP.L1 | Strontium Sr - 10 mg/l in HNO3 for ICP-MS (SrCO3 99.999%) | 100 | ml | 12 | Yes |
| M457.2N05FP.L1 | Tantalum Ta - 10 mg/l in 2% HNO3/0.5% HF for ICP-MS (Ta 99.99+%) | 100 | ml | 12 | Yes |
| M458.2NP.L1 | Terbium Tb - 10 mg/l in HNO3 for ICP-MS (Tb(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M459.2NP.L1 | Tellurum Te - 10 mg/l in HNO3 for ICP-MS (Te 99.999%) | 100 | ml | 12 | Yes |
| M461.2N02FP.L1 | Titanium Ti - 10 mg/l in HNO3/tr.HF for ICP-MS ((NH4)2TiF6, 99.998%) | 100 | ml | 12 | Yes |
| M462.2NP.L1 | Thallium Tl -10 mg/l in HNO3 for ICP-MS (TlNO3 99.999%) | 100 | ml | 12 | Yes |
| M463.2NP.L1 | Thulium Tm - 10 mg/l in HNO3 for ICP-MS (Tm2O3 99.999%) | 100 | ml | 12 | Yes |
| M464.2NP.L1 | Uranium U - 10 mg/l in HNO3 for ICP-MS (UO2(OOCCH3)2 99.99%) | 100 | ml | 12 | Yes |
| M465.2NP.L1 | Vanadium V - 10 mg/l in HNO3 for ICP-MS (NH4VO3 99.999%) | 100 | ml | 12 | Yes |
| M466.W.L1 | Tungsten W - 10 mg/l in 0.05% NH3 for ICP-MS (WO3 99.999%) | 100 | ml | 12 | Yes |
| M467.2NP.L1 | Yttrium Y - 10 mg/l in HNO3 for ICP-MS (Y2O3 99.999%) | 100 | ml | 12 | Yes |
| M468.2NP.L1 | Ytterbium Yb - 10 mg/l in HNO3 for ICP-MS (Yb2O3 99.999%) | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M469.2NP.L1 | Zinc Zn - 10 mg/l in HNO3 for ICP-MS (Zn 99.999%) | 100 | ml | 12 | Yes |
| M470.2N05FP.L1 | Zirconium Zr - 10 mg/l in HNO3/HF for ICP-MS (ZrO(NO3)2 99.99%) | 100 | ml | 12 | Yes |

# ICP-MS Single-Element Standards

*100 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M301.2NP.L1 | Silver Ag - 100 mg/l in HNO3 for ICP-MS (Ag 99.999%) | 100 | ml | 12 | Yes |
| M302.2NP.L1 | Aluminium Al - 100 mg/l in HNO3 for ICP-MS ( Al(NO3)3 - 99.999%) | 100 | ml | 12 | Yes |
| M303.2NP.L1 | Arsenic As - 100 mg/l in HNO3 for ICP-MS ( As 99.999%) | 100 | ml | 12 | Yes |
| M304.2CP.L1 | Gold Au - 100 mg/l in HCl for ICP-MS (Au 99.999%) | 100 | ml | 12 | Yes |
| M305.W.L1 | Boron B - 100 mg/l in H2O for ICP-MS ((NH4)2B4O7 99.999%) | 100 | ml | 12 | Yes |
| M306.2NP.L1 | Barium Ba - 100 mg/l in HNO3 for ICP-MS (BaCO3 99.999%) | 100 | ml | 12 | Yes |
| M307.2NP.L1 | Beryllium Be - 100 mg/l in 2% HNO3 for ICP-MS (Be4O(C2H3O2)6 99.999%) | 100 | ml | 12 | Yes |
| M308.2NP.L1 | Bismuth Bi - 100 mg/l in HNO3 for ICP-MS (Bi 99.999%) | 100 | ml | 12 | Yes |
| M309.2NP.L1 | Calcium Ca - 100 mg/l in HNO3 for ICP-MS (CaCO3 99.999%) | 100 | ml | 12 | Yes |
| M310.2NP.L1 | Cadmium Cd - 100 mg/l in HNO3 for ICP-MS (Cd 99.9999%) | 100 | ml | 12 | Yes |
| M311.2NP.L1 | Cerium Ce - 100 mg/l in HNO3 for ICP-MS (Ce(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M312.2NP.L1 | Cobalt Co - 100 mg/l in HNO3 for ICP-MS (Co(NO3)2 99.999%) | 100 | ml | 12 | Yes |
| M313.2NP.L1 | Chromium Cr - 100 mg/l in HNO3 for ICP-MS (Cr(NO3)3 99.999%) | 100 | ml | 12 | Yes |
| M314.2NP.L1 | Cesium Cs - 100 mg/l in HNO3 for ICP-MS (CsNO3 99.999%) | 100 | ml | 12 | Yes |
| M315.2NP.L1 | Copper Cu - 100 mg/l in HNO3 for ICP-MS (Cu 99.999%) | 100 | ml | 12 | Yes |
| M316.2NP.L1 | Dysprosium Dy - 100 mg/l in HNO3 for ICP-MS (Dy2O3 99.999%) | 100 | ml | 12 | Yes |
| M317.2NP.L1 | Erbium Er - 100 mg/l in HNO3 for ICP-MS (Er2O3 99.999%) | 100 | ml | 12 | Yes |
| M318.2NP.L1 | Europium Eu - 100 mg/l in HNO3 for ICP-MS (Eu2O3 99.99%) | 100 | ml | 12 | Yes |
| M319.2NP.L1 | Iron Fe - 100 mg/l in HNO3 for ICP-MS (Fe(NO3)3 99.9995%) | 100 | ml | 12 | Yes |
| M320.2NP.L1 | Gallium Ga - 100 mg/l in HNO3 for ICP-MS (Ga 99.999+%) | 100 | ml | 12 | Yes |
| M321.2NP.L1 | Gadolinium Gd - 100 mg/l in HNO3 for ICP-MS (Gd2O3 99.999%) | 100 | ml | 12 | Yes |
| M322.2N02FP.L1 | Germanium Ge - 100 mg/l in HNO3/tr.HF for ICP-MS (Ge 99.999%) | 100 | ml | 12 | Yes |
| M323.2N05FP.L1 | Hafnium Hf - 100 mg/l in HNO3/trHF for ICP-MS (HfO2 99.995%) | 100 | ml | 12 | Yes |
| M324.5NP.L1 | Mercury Hg - 100 mg/l in 5% HNO3 for ICP-MS (HgO 99.999+%) | 100 | ml | 12 | Yes |
| M325.2NP.L1 | Holmium Ho - 100 mg/l in HNO3 for ICP-MS (HoO3 99.99%) | 100 | ml | 12 | Yes |
| M326.2NP.L1 | Indium In - 100 mg/l in HNO3 for ICP-MS (In 99.999%) | 100 | ml | 12 | Yes |
| M327.2CP.L1 | Iridium Ir - 100 mg/l in HCl for ICP-MS ((NH4)2IrCl6 99.99%) | 100 | ml | 12 | Yes |
| M328.2NP.L1 | Potassium K - 100 mg/l in HNO3 for ICP-MS (KNO3 99.999%) | 100 | ml | 12 | Yes |
| M329.2NP.L1 | Lanthanum La - 100 mg/l in HNO3 for ICP-MS (La2O3 99.999%) | 100 | ml | 12 | Yes |
| M330.2NP.L1 | Lithium Li - 100 mg/l in HNO3 for ICP-MS (Li2CO3 99.999%) | 100 | ml | 12 | Yes |
| M331.2NP.L1 | Lutetium Lu - 100 mg/l in HNO3 for ICP-MS (Lu2O3 99.99%) | 100 | ml | 12 | Yes |
| M332.2NP.L1 | Magnesium Mg - 100 mg/l in HNO3 for ICP-MS (Mg(NO3)2, 99.9995%) | 100 | ml | 12 | Yes |
| M333.2NP.L1 | Manganese Mn - 100 mg/l in HNO3 for ICP-MS (Mn(NO3)2, 99.999%) | 100 | ml | 12 | Yes |
| M334.W.L1 | Molybdenum Mo - 100 mg/l in H2O for ICP-MS ((NH4)2MoO4, 99.999%) | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M335.2NP.L1 | Sodium Na - 100 mg/l in HNO3 for ICP-MS (NaNO3 99.999%) | 100 | ml | 12 | Yes |
| M336.2N05FP.L1 | Niobium Nb - 100 mg/l in HNO3/ tr.HF for ICP-MS (Nb 99.9+%) | 100 | ml | 12 | Yes |
| M337.2NP.L1 | Neodimium Nd - 100 mg/l in HNO3 for ICP-MS (Nd2O3 99.999%) | 100 | ml | 12 | Yes |
| M338.2NP.L1 | Nickel Ni - 100 mg/l in HNO3 for ICP-MS (Ni, 99.9998%) | 100 | ml | 12 | Yes |
| M340.W.L1 | Phosphorus P -100 mg/l in H2O for ICP-MS (NH4H2PO4 99.999%) | 100 | ml | 12 | Yes |
| M341.2NP.L1 | Lead Pb - 100 mg/l in HNO3 for ICP-MS (Pb(NO3)2 99.9995%) | 100 | ml | 12 | Yes |
| M342.2NP.L1 | Palladium Pd - 100 mg/l in HNO3 for ICP-MS (Pd 99.999%) | 100 | ml | 12 | Yes |
| M343.2NP.L1 | Praseodymium Pr - 100 mg/l in HNO3 for ICP-MS (Pr6O11 99.999%) | 100 | ml | 12 | Yes |
| M344.2CP.L1 | Platinum Pt - 100 mg/l in HCl for ICP-MS (Pt 99.999%) | 100 | ml | 12 | Yes |
| M345.2NP.L1 | Rubidium Rb - 100 mg/l in HNO3 for ICP-MS (RbNO3 99.99%) | 100 | ml | 12 | Yes |
| M346.2NP.L1 | Rhenium Re - 100 mg/l in HNO3 for ICP-MS (Re 99.995+%) | 100 | ml | 12 | Yes |
| M347.2CP.L1 | Rhodium Rh - 100 mg/l in HCl for ICP-MS ((RhCl3, 99.99%) | 100 | ml | 12 | Yes |
| M348.2CP.L1 | Ruthenium Ru - 100 mg/l in HCl for ICP-MS (RuCl3 99.99%) | 100 | ml | 12 | Yes |
| M349.W.L1 | Sulphur S - 100 mg/l in H2O for ICP-MS ((NH4)2SO4 99.999%) | 100 | ml | 12 | Yes |
| M350.2N05FP.L1 | Antimony Sb - 100 mg/l in HNO3/tr.HF for ICP-MS (Sb 99.999%) | 100 | ml | 12 | Yes |
| M351.2NP.L1 | Scandium Sc - 100 mg/l in HNO3 for ICP-MS (Sc2O3 99.999%) | 100 | ml | 12 | Yes |
| M352.2NP.L1 | Selenium Se - 100 mg/l in HNO3 for ICP-MS (Se 99.999%) | 100 | ml | 12 | Yes |
| M353.W.L1 | Silicon Si - 100 mg/l in H2O for ICP-MS ((NH4)2SiF6 99.999%) | 100 | ml | 12 | Yes |
| M354.2NP.L1 | Samarium Sm - 100 mg/l in HNO3 for ICP-MS (Sm2O3 99.999%) | 100 | ml | 12 | Yes |
| M355.1N05FP.L1 | Tin Sn - 100 mg/l in HNO3/tr.HF for ICP-MS (Sn 99.9999%) | 100 | ml | 12 | Yes |
| M356.2NP.L1 | Strontium Sr - 100 mg/l in HNO3 for ICP-MS (SrCO3 99.999%) | 100 | ml | 12 | Yes |
| M357.2N05FP.L1 | Tantalum Ta - 100 mg/l in HNO3/tr.HF for ICP-MS (Ta 99.99+%) | 100 | ml | 12 | Yes |
| M358.2NP.L1 | Terbium Tb - 100 mg/l in HNO3 for ICP-MS (TTb(NO3)3, 99.999%) | 100 | ml | 12 | Yes |
| M359.2NP.L1 | Tellurum Te - 100 mg/l in HNO3 for ICP-MS (Te 99.999%) | 100 | ml | 12 | Yes |
| M361.2N02FP.L1 | Titanium Ti - 100 mg/l in HNO3/tr.HF for ICP-MS ((NH4)2TiF6, 99.998%) | 100 | ml | 12 | Yes |
| M362.2NP.L1 | Thallium Tl -100 mg/l in HNO3 for ICP-MS (TlNO3 99.999%) | 100 | ml | 12 | Yes |
| M363.2NP.L1 | Thulium Tm - 100 mg/l in HNO3 for ICP-MS (Tm2O3 99.999%) | 100 | ml | 12 | Yes |
| M364.2NP.L1 | Uranium U - 100 mg/l in HNO3 for ICP-MS (UO2(OOCCH3)2, 99.99%) | 100 | ml | 12 | Yes |
| M365.2NP.L1 | Vanadium V - 100 mg/l in HNO3 for ICP-MS (NH4VO3 99.999%) | 100 | ml | 12 | Yes |
| M366.W.L1 | Tungsten W - 100 mg/l in 0.05% NH3 for ICP-MS (WO3 99.999%) | 100 | ml | 12 | Yes |
| M367.2NP.L1 | Yttrium Y - 100 mg/l in HNO3 for ICP-MS (Y2O3 99.999%) | 100 | ml | 12 | Yes |
| M368.2NP.L1 | Ytterbium Yb - 100 mg/l in HNO3 for ICP-MS (Yb2O3 99.999%) | 100 | ml | 12 | Yes |
| M369.2NP.L1 | Zinc Zn - 100 mg/l in HNO3 for ICP-MS (Zn 99.9999%) | 100 | ml | 12 | Yes |
| M370.2N05FP.L1 | Zirconium Zr - 100 mg/l in HNO3/tr.HF for ICP-MS (ZrO(NO3)2 99.99%) | 100 | ml | 12 | Yes |

# ICP-MS Single-Element Standards

*1000 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M256.2NP.L1 | Sr 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M201.2NP.L1 | Ag 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M202.2NP.L1 | Al 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M203.2NP.L1 | As 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M204.2CP.L1 | Au 1000mg/l in diluted HCl for ICP/MS | 100 | ml | 12 | Yes |
| M205.W.L1 | B 1000mg/l in H2O for ICP/MS | 100 | ml | 12 | Yes |
| M206.2NP.L1 | Ba 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M207.2NP.L1 | Be 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M208.2NP.L1 | Bi 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M209.2NP.L1 | Ca 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M210.2NP.L1 | Cd 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M212.2NP.L1 | Co 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M213.2NP.L1 | Cr 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M215.2NP.L1 | Cu 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M219.2NP.L1 | Fe 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M220.2NP.L1 | Ga 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M222.2N2FP.L1 | Ge 1000mg/l in diluted HNO3/ HF for ICP/MS | 100 | ml | 12 | Yes |
| M224.5N.L1 | Hg 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M226.2NP.L1 | In 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M228.2NP.L1 | K 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M229.2NP.L1 | La 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M230.2NP.L1 | Li 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M231.2NP.L1 | Lu 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M232.2NP.L1 | Mg 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M233.2NP.L1 | Mn 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M235.2NP.L1 | Na 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M238.2NP.L1 | Ni 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M240.W.L1 | P 1000mg/l in Water for ICP/MS | 100 | ml | 12 | Yes |
| M241.2NP.L1 | Pb 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M244.2CP.L1 | Pt 1000mg/l in diluted HCl for ICP/MS | 100 | ml | 12 | Yes |
| M247.2CP.L1 | Rh 1000mg/l in diluted HCl for ICP/MS | 100 | ml | 12 | Yes |
| M249.W.L1 | S 1000mg/l in Water for ICP/MS | 100 | ml | 12 | Yes |
| M250.2N05FP.L1 | Sb 1000mg/l in diluted HNO3/HF for ICP/MS | 100 | ml | 12 | Yes |
| M251.2NP.L1 | Sc 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M252.2NP.L1 | Se 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M255.1N05FP.L1 | Sn 1000mg/l in diluted HNO3/ HF for ICP/MS | 100 | ml | 12 | Yes |
| M258.2NP.L1 | Tb 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M261.2N2FP.L1 | Ti 1000mg/l in diluted HNO3/ HF for ICP/MS | 100 | ml | 12 | Yes |
| M262.2NP.L1 | Tl 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M265.2NP.L1 | V 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M267.2NP.L1 | Y 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M269.2NP.L1 | Zn 1000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |

# ICP-MS Single-Element Standards

*10 000 mg/l*

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| M108.10NP.L1 | Bi 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M109.2NP.L1 | Ca 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M110.5NP.L1 | Cd 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M112.5NP.L1 | Co 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M113.5NP.L1 | Cr 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M115.5NP.L1 | Cu 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M119.5NP.L1 | Fe 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M128.2NP.L1 | K 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M130.2NP.L1 | Li 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M132.2NP.L1 | Mg 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M133.5NP.L1 | Mn 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M135.2NP.L1 | Na 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |
| M140.W.L1 | P 10 000mg/l in H2O for ICP/MS | 100 | ml | 12 | Yes |
| M149.W.L1 | S 10 000mg/l in H2O for ICP/MS | 100 | ml | 12 | Yes |
| M150.10N2FP.L1 | Sb 10 000mg/l in diluted HNO3/ HF for ICP/MS | 100 | ml | 12 | Yes |
| M155.2N2FP.L1 | Sn 10 000mg/l in diluted HNO3/ HF for ICP/MS | 100 | ml | 12 | Yes |
| M169.5NP.L1 | Zn 10 000mg/l in diluted HNO3 for ICP/MS | 100 | ml | 12 | Yes |

## Blanks & dilution matrices

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MS6469.0.05N.L5 | Blank- Nitric Acid 0.5% | 500 | ml | 6 | No |
| MS6469.0.05N.1L | Blank- Nitric Acid 0.5% | 1000 | ml | 6 | No |
| MS6469.0.5N.L5 | Blank- Nitric Acid 5% | 500 | ml | 6 | No |
| MS6469.0.5N.1L | Blank- Nitric Acid 5% | 1000 | ml | 6 | No |
| MS6469.0.W.L5 | High - purity Water for ICP-MS | 500 | ml | 6 | No |
| MS6469.0.W.1L | High - purity Water for ICP-MS | 1000 | ml | 6 | No |

# ICP-MS Calibration Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 61D0.4.2N.L1 | ICP-MS Calibration standard - 3 components; Cr 4mg/l ; Sr 4mg/l ; Fe 20mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| 61D0.4.2N.L5 | ICP-MS Calibration standard - 3 components; Cr 4mg/l ; Sr 4mg/l ; Fe 20mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| D298.10.2N01F.L1 | ICP-MS Calibration standard - 4 components; 10mg/l each of Mo ; Sb ; Sn ; Ti in HNO3 2% ; HF 0.1% | 100 | ml | 6 | Yes |
| D298.10.2N01F.L5 | ICP-MS Calibration standard - 4 components; 10mg/l each of Mo ; Sb ; Sn ; Ti in HNO3 2% ; HF 0.1% | 500 | ml | 6 | Yes |
| MS8675.10.10C.L1 | ICP-MS Calibration standard - 4 components; 10mg/l each of Ir ; Pd ; Pt ; Ru in HCl 10% | 100 | ml | 12 | Yes |
| MS91C8.1K.2N.L1 | ICP-MS Calibration standard - 4 components; 1000mg/l each of Ca ; Mg ; K ; Na in HNO3 2% | 100 | ml | 12 | Yes |
| MS91C8.1K.2N.L5 | ICP-MS Calibration standard - 4 components; 1000mg/l each of Ca ; Mg ; K ; Na in HNO3 2% | 500 | ml | 12 | Yes |
| MS13BF.1K.2N.L1 | ICP-MS Calibration standard - 5 components; 1000mg/l each of Ca ; Mg ; K ; Na ; Fe in HNO3 2% | 100 | ml | 12 | Yes |
| MS13BF.1K.2N.L25 | ICP-MS Calibration standard - 5 components; 1000mg/l each of Ca ; Mg ; K ; Na ; Fe in HNO3 2% | 250 | ml | 12 | Yes |
| 161D.D001.2.5N05C.L5 | ICP-MS tuning solution B ICAP - 7 components; 1ug/l each of Ba ; Bi ; Ce ; Co ; In ; Li ; U in HNO3 2.5% ; HCl 0.5% | 500 | ml | 4 | Yes |
| 2407.2.2N.L1 | ICP-MS Calibration standard - 8 components; As 2mg/l ; Cd 2mg/l ; Cr 3mg/l ; Cu 10mg/l ; Fe 4mg/l ; Ni 2mg/l ; Pb 5mg/l ; Zn 10mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| 2407.2.2N.L25 | ICP-MS Calibration standard - 8 components; As 2mg/l ; Cd 2mg/l ; Cr 3mg/l ; Cu 10mg/l ; Fe 4mg/l ; Ni 2mg/l ; Pb 5mg/l ; Zn 10mg/l in HNO3 2% | 250 | ml | 6 | Yes |
| 2407.2.2N.L5 | ICP-MS Calibration standard - 8 components; As 2mg/l ; Cd 2mg/l ; Cr 3mg/l ; Cu 10mg/l ; Fe 4mg/l ; Ni 2mg/l ; Pb 5mg/l ; Zn 10mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| A2E5.10.5C.L1 | ICP-MS Calibration Precious Metals Standard - 8 components; 10mg/l each of Au ; Ir ; Os ; Pd ; Pt ; Re ; Rh ; Ru in HCl 5% | 100 | ml | 6 | Yes |
| MSBD60.10.2N01F.L1 | ICP-MS Calibration standard - 8 components: 10 mg/l each of Ge, Hf, Mo, Sb, Sn, Te, W, Zr, in HNO3 2%; HF 0.1%; | 100 | ml | 6 | Yes |
| MSBD60.10.2N01F.L5 | ICP-MS Calibration standard - 8 components: 10 mg/l each of Ge, Hf, Mo, Sb, Sn, Te, W, Zr, in HNO3 2%; HF 0.1%; | 500 | ml | 6 | Yes |
| C304.50.2CtrF.L1 | ICP-MS Calibration standard - 10 components; W 40mg/l ; Rh 40mg/l ; Pt 40mg/l ; Pd 40mg/l ; Te 40mg/l ; Zr 40mg/l ; Si 40mg/l ; Mo 50mg/l ; Sb 80mg/l ; Sn 80mg/l in HCl 2% ; HF tr | 100 | ml | 6 | Yes |
| C304.50.2CtrF.L5 | ICP-MS Calibration standard - 10 components; W 40mg/l ; Rh 40mg/l ; Pt 40mg/l ; Pd 40mg/l ; Te 40mg/l ; Zr 40mg/l ; Si 40mg/l ; Mo 50mg/l ; Sb 80mg/l ; Sn 80mg/l in HCl 2% ; HF tr | 500 | ml | 6 | Yes |
| D743.10.2N.L1 | ICP-MS Calibration standard - 10 components; 10mg/l each of Ba ; Be ; Bi ; Ce ; Co ; In ; Li ; Ni ; Pb ; U in HNO3 2% | 100 | ml | 6 | Yes |
| D743.10.2N.L5 | ICP-MS Calibration standard - 10 components; 10mg/l each of Ba ; Be ; Bi ; Ce ; Co ; In ; Li ; Ni ; Pb ; U in HNO3 2% | 500 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| E9A6.2D5.2N.L1 | ICP-MS Calibration standard - 12 components; As 2.5mg/l ; Cd 0.5mg/l ; Cr 5mg/l ; Hg 0.2mg/l ; Ni 5mg/l ; Pb 5mg/l ; Zn 5mg/l ; Ba 2.5mg/l ; Cu 5mg/l ; Mo 3mg/l ; Sb 0.5mg/l ; Se 0.7mg/l in HNO3 2% | 100 | ml | 4 | Yes |
| E9A6.2D5.2N.L5 | ICP-MS Calibration standard - 12 components; As 2.5mg/l ; Cd 0.5mg/l ; Cr 5mg/l ; Hg 0.2mg/l ; Ni 5mg/l ; Pb 5mg/l ; Zn 5mg/l ; Ba 2.5mg/l ; Cu 5mg/l ; Mo 3mg/l ; Sb 0.5mg/l ; Se 0.7mg/l in HNO3 2% | 500 | ml | 4 | Yes |
| 058E.10.5N.L1 | ICP-MS Refractory Elements Standard - 12 components; 10mg/l each of Ge ; Hf ; Mo ; Nb ; Sb ; Si ; Sn ; Ta ; Te ; Ti ; W ; Zr in HNO3 5% ; HF tr% | 100 | ml | 6 | Yes |
| MSE5D8.10.5N.L1 | ICP-MS Calibration standard - 16 components; 10ug/ml each of Cu ; Sr ; Mn ; Li ; Co ; As ; Zn ; Se ; Cs ; Rb ; Pb ; Sc ; Ni ; V ; Cr ; Be in HNO3 5% | 100 | ml | 6 | Yes |
| MSE5D8.10.5N.L5 | ICP-MS Calibration standard - 16 components; 10ug/ml each of Cu ; Sr ; Mn ; Li ; Co ; As ; Zn ; Se ; Cs ; Rb ; Pb ; Sc ; Ni ; V ; Cr ; Be in HNO3 5% | 500 | ml | 6 | Yes |
| MSBEDC.10.2N.L1 | ICP-MS Calibration standard - 18 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Cd ; Cr ; Co ; Cu ; Mn ; Ni ; Pb ; Se ; Th ; Tl ; U ; V ; Zn in HNO3 2% | 100 | ml | 6 | Yes |
| E5B8.K1.5N.L1 | ICP-MS Calibration standard - 21 components; 100ug/ml each of Al ; Ag ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Tl ; V ; Zn ; Sn in HNO3 5% | 100 | ml | 12 | Yes |
| E5B8.K1.5N.L25 | ICP-MS Calibration standard - 21 components; 100ug/ml each of Al ; Ag ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Tl ; V ; Zn ; Sn in HNO3 5% | 250 | ml | 12 | Yes |
| E5B8.K1.5N.L5 | ICP-MS Calibration standard - 21 components; 100ug/ml each of Al ; Ag ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Tl ; V ; Zn ; Sn in HNO3 5% | 500 | ml | 12 | Yes |
| MS069C.5.2N.L1 | ICP-MS Calibration standard - 22 components; Ag 5mg/l ; Al 30mg/l ; As 10mg/l ; B 30mg/l ; Ba 10mg/l ; Be 3mg/l ; Cd 3mg/l ; Co 5mg/l ; Cr 10mg/l ; Cu 10mg/l ; Mn 5mg/l ; Mo 3mg/l ; Ni 10mg/l ; Pb 5mg/l ; Se 5mg/l ; Sn 10mg/l ; Tl 2mg/l ; Te 10mg/l ; V 10mg/l ; Zn 100mg/l ; Sr 100mg/l ; Ti 3mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| MS069C.5.2N.L5 | ICP-MS Calibration standard - 22 components; Ag 5mg/l ; Al 30mg/l ; As 10mg/l ; B 30mg/l ; Ba 10mg/l ; Be 3mg/l ; Cd 3mg/l ; Co 5mg/l ; Cr 10mg/l ; Cu 10mg/l ; Mn 5mg/l ; Mo 3mg/l ; Ni 10mg/l ; Pb 5mg/l ; Se 5mg/l ; Sn 10mg/l ; Tl 2mg/l ; Te 10mg/l ; V 10mg/l ; Zn 100mg/l ; Sr 100mg/l ; Ti 3mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| 0F49.50.2N.L1 | ICP-MS Calibration standard - 27 components; B 40mg/l ; Be 40mg/l ; Cd 40mg/l ; Se 40mg/l ; Tl 40mg/l ; Li 40mg/l ; Ti 40mg/l ; In 40mg/l ; Ag 50mg/l ; Ba 50mg/l ; Co 50mg/l ; Cr 50mg/l ; Cu 50mg/l ; Fe 50mg/l ; Mn 50mg/l ; Ni 50mg/l ; Sr 50mg/l ; V 50mg/l ; Zn 50mg/l ; Al 80mg/l ; As 80mg/l ; K 80mg/l ; Pb 80mg/l ; Na 80mg/l ; Mg 80mg/l ; Ca 80mg/l ; P 200mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| 0F49.50.2N.L5 | ICP-MS Calibration standard - 27 components; B 40mg/l ; Be 40mg/l ; Cd 40mg/l ; Se 40mg/l ; Tl 40mg/l ; Li 40mg/l ; Ti 40mg/l ; In 40mg/l ; Ag 50mg/l ; Ba 50mg/l ; Co 50mg/l ; Cr 50mg/l ; Cu 50mg/l ; Fe 50mg/l ; Mn 50mg/l ; Ni 50mg/l ; Sr 50mg/l ; V 50mg/l ; Zn 50mg/l ; Al 80mg/l ; As 80mg/l ; K 80mg/l ; Pb 80mg/l ; Na 80mg/l ; Mg 80mg/l ; Ca 80mg/l ; P 200mg/l in HNO3 2% | 500 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 0956.D05.5N.L1 | ICP-MS Calibration standard - 28 components; Al 0.050mg/l ; As 0.050mg/l ; B 0.2mg/l ; Ba 0.050mg/l ; Bi 0.050mg/l ; Ca 0.5mg/l ; Cd 0.005mg/l ; Co 0.050mg/l ; Cr 0.1mg/l ; Be 0.010mg/l ; Cu 0.050mg/l ; Fe 0.1mg/l ; K 0.2mg/l ; Na 0.5mg/l ; Li 0.020mg/l ; Mg 0.250mg/l ; Mn 0.050mg/l ; Mo 0.050mg/l ; Ni 0.1mg/l ; P 0.3mg/l ; Pb 0.050mg/l ; Se 0.05mg/l ; Si 1mg/l ; S 1mg/l ; Ti 0.050mg/l ; U 0.050mg/l ; V 0.050mg/l ; Zn 0.1mg/l in HNO3 5% | 100 | ml | 4 | Yes |
| 0956.D05.5N.L5 | ICP-MS Calibration standard - 28 components; Al 0.050mg/l ; As 0.050mg/l ; B 0.2mg/l ; Ba 0.050mg/l ; Bi 0.050mg/l ; Ca 0.5mg/l ; Cd 0.005mg/l ; Co 0.050mg/l ; Cr 0.1mg/l ; Be 0.010mg/l ; Cu 0.050mg/l ; Fe 0.1mg/l ; K 0.2mg/l ; Na 0.5mg/l ; Li 0.020mg/l ; Mg 0.250mg/l ; Mn 0.050mg/l ; Mo 0.050mg/l ; Ni 0.1mg/l ; P 0.3mg/l ; Pb 0.050mg/l ; Se 0.05mg/l ; Si 1mg/l ; S 1mg/l ; Ti 0.050mg/l ; U 0.050mg/l ; V 0.050mg/l ; Zn 0.1mg/l in HNO3 5% | 500 | ml | 4 | Yes |
| MSE194.10.2N.L1 | ICP-MS Calibration standard - 31 components: 10mg/l each of Ag ; Al ; As ; Ba ; B ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Gd ; Ho ; La ; Li ; Lu ; Mn ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; U ; V ; Zn in HNO3 2% | 100 | ml | 6 | Yes |
| MSE194.10.2N.L25 | ICP-MS Calibration standard - 31 components: 10mg/l each of Ag ; Al ; As ; Ba ; B ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Gd ; Ho ; La ; Li ; Lu ; Mn ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; U ; V ; Zn in HNO3 2% | 250 | ml | 6 | Yes |

# Quality Control Standards for ICP-MS

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MSD0BC.D01.2N.L1 | ICP-MS QCS - 0.01 mg/l Hg in HNO3 2% | 100 | ml | 6 | Yes |
| MSD0BC.D01.2N.L5 | ICP-MS QCS - 0.01 mg/l Hg in HNO3 2% | 500 | ml | 6 | Yes |
| MSBEDC.D01.1N.L1 | ICP-MS QCS - 18 elements : 0.01 mg/l each of Ag, Al, As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Se, Th, Tl, U, V, Zn, in HNO3 1% | 100 | ml | 6 | Yes |
| MSBEDC.D01.1N.L5 | ICP-MS QCS - 18 elements : 0.01 mg/l each of Ag, Al, As, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Se, Th, Tl, U, V, Zn, in HNO3 1% | 500 | ml | 6 | Yes |
| A19C.D002.2N01F.L1 | ICP-MS QCS - Trace Metals in Drinking Water Standard - 29 components; Al 120ug/l ; Sb 10ug/l ; As 80ug/l ; Ba 50ug/l ; Be 20ug/l ; Bi 10ug/l ; Cd 10ug/l ; Ca 35000ug/l ; Cr 20ug/l ; Co 25ug/l ; Cu 20ug/l ; Fe 100ug/l ; Pb 40ug/l ; Li 20ug/l ; Mg 9000ug/l ; Mn 40ug/l ; Mo 100ug/l ; Ni 60ug/l ; K 2500ug/l ; Rb 10ug/l ; Se 10ug/l ; Ag 2ug/l ; Na 6000ug/l ; Sr 250ug/l ; Te 3ug/l ; Tl 10ug/l ; U 10ug/l ; V 30ug/l ; Zn 70ug/l in HNO3 2% ; HF 0.1% | 100 | ml | 4 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| A19C.D002.2N01F.L25 | ICP-MS QCS - Trace Metals in Drinking Water Standard - 29 components; Al 120ug/l ; Sb 10ug/l ; As 80ug/l ; Ba 50ug/l ; Be 20ug/l ; Bi 10ug/l ; Cd 10ug/l ; Ca 35000ug/l ; Cr 20ug/l ; Co 25ug/l ; Cu 20ug/l ; Fe 100ug/l ; Pb 40ug/l ; Li 20ug/l ; Mg 9000ug/l ; Mn 40ug/l ; Mo 100ug/l ; Ni 60ug/l ; K 2500ug/l ; Rb 10ug/l ; Se 10ug/l ; Ag 2ug/l ; Na 6000ug/l ; Sr 250ug/l ; Te 3ug/l ; Tl 10ug/l ; U 10ug/l ; V 30ug/l ; Zn 70ug/l in HNO3 2% ; HF 0.1% | 250 | ml | 4 | Yes |
| A19C.D002.2N01F.L5 | ICP-MS QCS - Trace Metals in Drinking Water Standard - 29 components; Al 120ug/l ; Sb 10ug/l ; As 80ug/l ; Ba 50ug/l ; Be 20ug/l ; Bi 10ug/l ; Cd 10ug/l ; Ca 35000ug/l ; Cr 20ug/l ; Co 25ug/l ; Cu 20ug/l ; Fe 100ug/l ; Pb 40ug/l ; Li 20ug/l ; Mg 9000ug/l ; Mn 40ug/l ; Mo 100ug/l ; Ni 60ug/l ; K 2500ug/l ; Rb 10ug/l ; Se 10ug/l ; Ag 2ug/l ; Na 6000ug/l ; Sr 250ug/l ; Te 3ug/l ; Tl 10ug/l ; U 10ug/l ; V 30ug/l ; Zn 70ug/l in HNO3 2% ; HF 0.1% | 500 | ml | 4 | Yes |
| MSE194.D01.1N.L1 | ICP-MS QCS - 31 components; 0.01mg/l each of Ag ; Al ; As ; B ; Ba ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Gd ; Ho ; La ; Li ; Lu ; Mn ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; U ; V ; Zn in HNO3 1% | 100 | ml | 6 | Yes |
| MSE194.D01.1N.L5 | ICP-MS QCS - 31 components; 0.01mg/l each of Ag ; Al ; As ; B ; Ba ; Cd ; Ce ; Co ; Cr ; Cu ; Dy ; Er ; Gd ; Ho ; La ; Li ; Lu ; Mn ; Nd ; Ni ; P ; Pb ; Rb ; Se ; Sm ; Sr ; Tl ; Tm ; U ; V ; Zn in HNO3 1% | 500 | ml | 6 | Yes |

# Internal Standards for ICP-MS

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MSA965.K1.2C.L1 | ICP-MS Internal Standard - Au 100 mg/l in HCl 2% | 100 | ml | 12 | Yes |
| MS6925.K1.2N.L1 | ICP-MS Internal Standard - Be 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS3926.K1.2N.L1 | ICP-MS Internal Standard - Bi 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MSE11C.K1.2N.L1 | ICP-MS Internal Standard - Cs 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS6994.K1.2N.L1 | ICP-MS Internal Standard - Eu 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS59E8.K1.2N.L1 | ICP-MS Internal Standard - Ga 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS69E9.K1.2N.L1 | ICP-MS Internal Standard - Ge 100 mg/l in HNO3 2%/ 0.1% HF | 100 | ml | 12 | Yes |
| MSB0BE.K1.2N.L1 | ICP-MS Internal Standard - Ho 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS8C82.K1.2N.L1 | ICP-MS Internal Standard - In 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MSDE98.K1.2N.L1 | ICP-MS Internal Standard - Pr 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MSAAE4.K1.2N.L1 | ICP-MS Internal Standard - Re 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS06E6.K1.2C.L1 | ICP-MS Internal Standard - Rh 100 mg/l in HCl 2% | 100 | ml | 12 | Yes |
| MSE2D9.K1.2N.L1 | ICP-MS Internal Standard - Sc 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MSDE6D.K1.2N.L1 | ICP-MS Internal Standard - Tb 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS1837.K1.2N.L1 | ICP-MS Internal Standard - Y 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| MS1F40.K1.2N.L1 | ICP-MS Internal Standard - Yb 100 mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| 7556.10.N.L1 | ICP-MS Internal Standard 2 - 8 components; 10mg/l each of Bi ; Ho ; In ; 6Li ; Sc ; Tb ; Y ; Rh in HNO3 2% | 100 | ml | 6 | Yes |
| 5188-6525.L1 | ICP-MS Alternate Internal Standard 2 - 8 components; 100mg/l each of Bi ; Ge ; In ; 6Li ; Lu ; Rh ; Sc ; Tb in HNO3 10% | 100 | ml | 12 | Yes |

# Instrument Check Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MS4C39.10.2N.L1 | ICP-MS ICS - Tuning Solution 4 elements : Cerium 10mg/l; Lithium 10mg/l; Thallium 10mg/l; Yttrium 10mg/l; Nitric Acid 2%; | 100 | ml | 6 | Yes |
| 161D.1.2N05C.L1 | ICP-MS ICS - Tuning Solution - Tune B ICAP - 7 components; 1mg/l each of Ba ; Bi ; Ce ; Co ; In ; Li ; U in HNO3 2% ; HCl 0.5% | 100 | ml | 6 | Yes |
| MS8AC1.10.2N.L1 | ICP-MS ICS - Tuning Solution 9 elements: 10mg/l each of Ba ; Be ; Ce ; Co ; In ; Pb ; Mg ; Rh ; U in HNO3 2% | 100 | ml | 12 | Yes |
| 9781.2.5NTF.L1 | ICP-MS ICS - Contract Required Detection Limit Standard 2 - 22 components; Ca 1000mg/l ; Mg 1000mg/l ; K 1000mg/l ; Na 1000mg/l ; Fe 400mg/l ; Al 40mg/l ; Ba 20mg/l ; Se 10mg/l ; V 10mg/l ; Sb 4mg/l ; Cr 4mg/l ; Cu 4mg/l ; Zn 4mg/l ; As 2mg/l ; Be 2mg/l ; Cd 2mg/l ; Co 2mg/l ; Pb 2mg/l ; Mn 2mg/l ; Ni 2mg/l ; Ag 2mg/l ; Tl 2mg/l in HNO3 5% ; C4H6O6 tr% ; HF tr% | 100 | ml | 6 | Yes |

# Plasma Setup Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| MSD0BC.1.2N.L1 | ICP-MS PSS - Mercury 1mg/l; Nitric Acid 2%; | 100 | ml | 6 | Yes |
| MS9562.D01.05N.L1 | ICP-MS PSS - 13 components: 0.01 mg/l each of Mg, Al, Cr, Mn, Cu, Rh, In, Cd, Ce, Pb, Th, B, Ba, in HNO3 0.5%; | 100 | ml | 6 | Yes |
| MS9562.D01.05N.L5 | ICP-MS PSS - 13 components: 0.01 mg/l each of Mg, Al, Cr, Mn, Cu, Rh, In, Cd, Ce, Pb, Th, B, Ba, in HNO3 0.5%; | 500 | ml | 6 | Yes |

# Ion Chromatography Standards

# Ion Chromatography Standards

All IC Standards are Certified Reference Materials, produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

## Single-Ion Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| H016.W.L1 | Acetates (CH3COO- ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H016.W.L25 | Acetates (CH3COO- ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H016.W.L5 | Acetates (CH3COO- ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H059.W.L1 | Adipates 1000mg/l in Water | 100 | ml | 12 | Yes |
| H059.W.L25 | Adipates 1000mg/l in Water | 250 | ml | 12 | Yes |
| H059.W.L5 | Adipates 1000mg/l in Water | 500 | ml | 12 | Yes |
| H011.W.L1 | Ammonium (NH4+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H011.W.L25 | Ammonium (NH4+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H011.W.L5 | Ammonium (NH4+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H031.W.L1 | Ammonium as N (NH4+ (as N)) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H031.W.L25 | Ammonium as N (NH4+ (as N)) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H031.W.L5 | Ammonium as N (NH4+ (as N)) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H022.W.L1 | Barium (Ba2+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H022.W.L25 | Barium (Ba2+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H022.W.L5 | Barium (Ba2+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H030.W.L1 | Benzoates (C6H5CO2-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H030.W.L25 | Benzoates (C6H5CO2-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H030.W.L5 | Benzoates (C6H5CO2-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H020.W.L1 | Bromates (BrO3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H020.W.L25 | Bromates (BrO3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H020.W.L5 | Bromates (BrO3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H001.W.L1 | Bromides (Br-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H001.W.L25 | Bromides (Br-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H001.W.L5 | Bromides (Br-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H060.W.L1 | Butyrates (C4H7O2-) 1000mg/l in Water | 100 | ml | 12 | Yes |
| H060.W.L25 | Butyrates (C4H7O2-) 1000mg/l in Water | 250 | ml | 12 | Yes |
| H060.W.L5 | Butyrates (C4H7O2-) 1000mg/l in Water | 500 | ml | 12 | Yes |
| H002.W.L1 | Calcium (Ca2+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H002.W.L25 | Calcium (Ca2+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H002.W.L5 | Calcium (Ca2+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H061.W.L1 | Carbonates (CO32-) 1000mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H061.W.L5 | Carbonates (CO32-) 1000mg/l in H2O for IC | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| H027.W.L1 | Cesium (Cs+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H027.W.L25 | Cesium (Cs+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H027.W.L5 | Cesium (Cs+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H025.W.L1 | Chlorates (ClO3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H025.W.L25 | Chlorates (ClO3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H025.W.L5 | Chlorates (ClO3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H003.W.L1 | Chlorides (Cl- ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H003.W.L25 | Chlorides (Cl- ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H003.W.L5 | Chlorides (Cl- ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H028.01O.L1 | Chlorites (ClO2-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H028.01O.L25 | Chlorites (ClO2-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H028.01O.L5 | Chlorites (ClO2-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H004.W.L1 | Chromium (Cr6+ ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H004.W.L25 | Chromium (Cr6+ ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H004.W.L5 | Chromium (Cr6+ ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H029.W.L1 | Citrates (C6H5O73-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H029.W.L25 | Citrates (C6H5O73-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H029.W.L5 | Citrates (C6H5O73-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H032.W.L1 | Cyanides 1 g/l in Water/ tr. KOH for IC | 100 | ml | 12 | Yes |
| H032.W.L5 | Cyanides 1 g/l in Water/ tr. KOH for IC | 500 | ml | 12 | Yes |
| H032.W.L25 | Cyanides 1 g/l in Water/ tr. KOH for IC | 250 | ml | 12 | Yes |
| H033.W.L1 | Diethanolamine ((HOC2H4)2NH2+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H033.W.L25 | Diethanolamine ((HOC2H4)2NH2+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H033.W.L5 | Diethanolamine ((HOC2H4)2NH2+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H005.W.L1 | Fluorides (F- ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H005.W.L25 | Fluorides (F- ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H005.W.L5 | Fluorides (F- ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H026.W.L1 | Formates (HCOO-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H026.W.L25 | Formates (HCOO-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H026.W.L5 | Formates (HCOO-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H034.W.L1 | Glycolates (C2H3O3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H034.W.L25 | Glycolates (C2H3O3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H034.W.L5 | Glycolates (C2H3O3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H035.W.L1 | Hydrogenphthalates (C6H4(COO)2H -) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H035.W.L25 | Hydrogenphthalates (C6H4(COO)2H -) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H035.W.L5 | Hydrogenphthalates (C6H4(COO)2H -) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H057.W.L1 | Hydrogensulfites (HSO3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H057.W.L25 | Hydrogensulfites (HSO3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H057.W.L5 | Hydrogensulfites (HSO3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H036.W.L1 | Iodates (IO3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H036.W.L25 | Iodates (IO3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H036.W.L5 | Iodates (IO3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H006.W.L1 | Iodides (I- ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H006.W.L25 | Iodides (I- ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| H006.W.L5 | Iodides (I- ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H037.W.L1 | Lactates (CH3CH(OH)COO- )1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H037.W.L25 | Lactates (CH3CH(OH)COO- )1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H037.W.L5 | Lactates (CH3CH(OH)COO- )1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H008.W.L1 | Lithium (Li+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H008.W.L25 | Lithium (Li+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H008.W.L5 | Lithium (Li+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H009.W.L1 | Magnesium (Mg2+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H009.W.L25 | Magnesium (Mg2+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H009.W.L5 | Magnesium (Mg2+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H038.W.L1 | Maleates (C2H2(COO)22-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H038.W.L25 | Maleates (C2H2(COO)22-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H038.W.L5 | Maleates (C2H2(COO)22-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H039.W.L1 | Methanesulphonates (CH3SO3- ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H039.W.L25 | Methanesulphonates (CH3SO3- ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H039.W.L5 | Methanesulphonates (CH3SO3- ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H053.W.L1 | 3-Methoxypropylamine (CH3O(CH2)3NH3+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H053.W.L25 | 3-Methoxypropylamine (CH3O(CH2)3NH3+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H053.W.L5 | 3-Methoxypropylamine (CH3O(CH2)3NH3+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H040.W.L1 | Monoethanolamine (HOC2H4NH3+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H040.W.L25 | Monoethanolamine (HOC2H4NH3+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H040.W.L5 | Monoethanolamine (HOC2H4NH3+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H041.W.L1 | Monomethylamine (CH3NH3+ ) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H041.W.L25 | Monomethylamine (CH3NH3+ ) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H041.W.L5 | Monomethylamine (CH3NH3+ ) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H013.W.L1 | Nitrates (NO3-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H013.W.L25 | Nitrates (NO3-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H013.W.L5 | Nitrates (NO3-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H044.W.L5 | Nitrates as N (NO3- (as N)) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H044.W.L25 | Nitrates as N (NO3- (as N)) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H044.W.L1 | Nitrates as N (NO3- (as N)) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H042.W.L1 | Nitrilotriacetates (N(CH2COO)33-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H042.W.L25 | Nitrilotriacetates (N(CH2COO)33-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H042.W.L5 | Nitrilotriacetates (N(CH2COO)33-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H012.W.L1 | Nitrites (NO2-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H012.W.L25 | Nitrites (NO2-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H012.W.L5 | Nitrites (NO2-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H043.W.L1 | Nitrites as N (NO2- (as N)) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H043.W.L25 | Nitrites as N (NO2- (as N)) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H043.W.L5 | Nitrites as N (NO2- (as N)) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H024.W.L1 | Oxalates (C2O42- )1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H024.W.L25 | Oxalates (C2O42- )1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| H024.W.L5 | Oxalates (C2O42- )1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H017.W.L1 | Perchlorates (ClO4-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H017.W.L25 | Perchlorates (ClO4-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H017.W.L5 | Perchlorates (ClO4-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H045.W.L1 | Phosphates (PO43- (as P)) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H045.W.L25 | Phosphates (PO43- (as P)) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H045.W.L5 | Phosphates (PO43- (as P)) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H014.W.L1 | Phosphates (PO43-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H014.W.L25 | Phosphates (PO43-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H014.W.L5 | Phosphates (PO43-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H007.W.L1 | Potassium (K+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H007.W.L25 | Potassium (K+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H007.W.L5 | Potassium (K+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H046.W.L1 | Propionates (C2H5COO-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H046.W.L25 | Propionates (C2H5COO-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H046.W.L5 | Propionates (C2H5COO-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H047.1O.L1 | Silicates (SiO3 2-) 1000 mg/l in diluted NaOH for IC | 100 | ml | 12 | Yes |
| H047.1O.L25 | Silicates (SiO3 2-) 1000 mg/l in diluted NaOH for IC | 250 | ml | 12 | Yes |
| H047.1O.L5 | Silicates (SiO3 2-) 1000 mg/l in diluted NaOH for IC | 500 | ml | 12 | Yes |
| H010.W.L1 | Sodium (Na+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H010.W.L25 | Sodium (Na+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H010.W.L5 | Sodium (Na+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H023.W.L1 | Strontium (Sr2+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H023.W.L25 | Strontium (Sr2+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H023.W.L5 | Strontium (Sr2+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H048.W.L1 | Succinates (OOC(CH2)2COO2-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H048.W.L25 | Succinates (OOC(CH2)2COO2-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H048.W.L5 | Succinates (OOC(CH2)2COO2-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H015.W.L1 | Sulphates (SO42-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H015.W.L25 | Sulphates (SO42-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H015.W.L5 | Sulphates (SO42-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H018.W.L1 | Sulphites as S(IV) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H018.W.L25 | Sulphites as S(IV) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H018.W.L5 | Sulphites as S(IV) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H049.W.L1 | Tartrates (OOC(CHOH)2COO2-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H049.W.L25 | Tartrates (OOC(CHOH)2COO2-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H049.W.L5 | Tartrates (OOC(CHOH)2COO2-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H058.W.L1 | Tetrafluoroborates (BF4-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H058.W.L25 | Tetrafluoroborates (BF4-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H058.W.L5 | Tetrafluoroborates (BF4-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H021.W.L1 | Thiocyanates (SCN-) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H021.W.L25 | Thiocyanates (SCN-) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H021.W.L5 | Thiocyanates (SCN-) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H050.011044.L1 | Thiosulphates (S2O32-) 1000 mg/l in diluted n-pentanol for IC | 100 | ml | 12 | Yes |
| H050.011044.L25 | Thiosulphates (S2O32-) 1000 mg/l in diluted n-pentanol for IC | 250 | ml | 12 | Yes |
| H050.011044.L5 | Thiosulphates (S2O32-) 1000 mg/l in diluted n-pentanol for IC | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| H051.W.L1 | Triethanolamine ((HOC2H4)3NH+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H051.W.L25 | Triethanolamine ((HOC2H4)3NH+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H051.W.L5 | Triethanolamine ((HOC2H4)3NH+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H054.W.L1 | Triethylamine ((C2H5)3NH+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H054.W.L25 | Triethylamine ((C2H5)3NH+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H054.W.L5 | Triethylamine ((C2H5)3NH+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H052.W.L1 | Trimetylamine ((CH3)3NH+) 1000 mg/l in H2O for IC | 100 | ml | 12 | Yes |
| H052.W.L25 | Trimetylamine ((CH3)3NH+) 1000 mg/l in H2O for IC | 250 | ml | 12 | Yes |
| H052.W.L5 | Trimetylamine ((CH3)3NH+) 1000 mg/l in H2O for IC | 500 | ml | 12 | Yes |
| H056.W.L1 | Hydrazine N2H4 1000mg/l in H2O | 100 | ml | 12 | Yes |
| H056.W.L5 | Hydrazine N2H4 1000mg/l in H2O | 500 | ml | 12 | Yes |

# Multi-Ion Standards

## Anion Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 23A9.5.W.L1 | Multi-anion standard - 2 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 5mg/l in Water | 100 | ml | 6 | Yes |
| 23A9.5.W.L5 | Multi-anion standard - 2 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 5mg/l in Water | 500 | ml | 6 | Yes |
| 3029.D2.W.L1 | Multi-anion standard - 2 components: Phosphates (PO43-) 20mg/l ; Chlorides (Cl-) 0.2mg/l in Water | 100 | ml | 4 | Yes |
| 3029.D2.W.L5 | Multi-anion standard - 2 components: Phosphates (PO43-) 20mg/l ; Chlorides (Cl-) 0.2mg/l in Water | 500 | ml | 4 | Yes |
| 3029.D5.W.L1 | Multi-anion standard - 2 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 0.5mg/l in Water | 100 | ml | 4 | Yes |
| 3029.D5.W.L5 | Multi-anion standard - 2 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 0.5mg/l in Water | 500 | ml | 4 | Yes |
| 3905.1K.W.L1 | Multi-anion standard - 3 components: 1000mg/l each of Chlorides (Cl-) ; Nitrates (NO3-) ; Sulphates (SO42-) in Water | 100 | ml | 12 | Yes |
| 3784.D2.W.L1 | Multi-anion standard - 3 components: Phosphates (PO43-) 20mg/l ; Chlorides (Cl-) 0.2mg/l ; Sulphates (SO42-) 0.2mg/l in Water | 100 | ml | 4 | Yes |
| 3784.D2.W.L5 | Multi-anion standard - 3 components: Phosphates (PO43-) 20mg/l ; Chlorides (Cl-) 0.2mg/l ; Sulphates (SO42-) 0.2mg/l in Water | 500 | ml | 4 | Yes |
| 3784.D5.W.L1 | Multi-anion standard - 3 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 0.5mg/l ; Sulphates (SO42-) 0.5mg/l in Water | 100 | ml | 4 | Yes |
| 3784.D5.W.L5 | Multi-anion standard - 3 components: Phosphates (PO43-) 50mg/l ; Chlorides (Cl-) 0.5mg/l ; Sulphates (SO42-) 0.5mg/l in Water | 500 | ml | 4 | Yes |
| 60DB.1K.W.L1 | Multi-anion standard - 3 components: 1000mg/l each of Fluorides (F-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 100 | ml | 12 | Yes |
| 60DB.1K.W.L25 | Multi-anion standard - 3 components: 1000mg/l each of Fluorides (F-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 250 | ml | 12 | Yes |
| 60DB.1K.W.L5 | Multi-anion standard - 3 components: 1000mg/l each of Fluorides (F-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 500 | ml | 12 | Yes |
| RM007001L1 | Multi-anion standard - 5 components: Fluorides (F-) 100mg/l ; Chlorides (Cl-) 250mg/l ; Nitrates (NO3-) 500mg/l ; Sulphates (SO42-) 500mg/l ; Phosphates (PO43-) 1000mg/l in Water | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| RM007001L5 | Multi-anion standard - 5 components: Fluorides (F-) 100mg/l ; Chlorides (Cl-) 250mg/l ; Nitrates (NO3-) 500mg/l ; Sulphates (SO42-) 500mg/l ; Phosphates (PO43-) 1000mg/l in Water | 500 | ml | 12 | Yes |
| D251.1K.W.L1 | Multi-anion standard - 5 components: 1000mg/l each of Fluorides (F-) ; Chlorides (Cl-) ; Phosphates (PO43-) ; Sulphates (SO42-) ; Nitrates (NO3-) in Water | 100 | ml | 12 | Yes |
| D251.1K.W.L5 | Multi-anion standard - 5 components: 1000mg/l each of Fluorides (F-) ; Chlorides (Cl-) ; Phosphates (PO43-) ; Sulphates (SO42-) ; Nitrates (NO3-) in Water | 500 | ml | 12 | Yes |
| D371.40.W.L1 | Multi-anion standard - 5 components: Chlorides (Cl-) 40mg/l ; Nitrites (NO2-) 10mg/l ; Nitrates (NO3-) 40mg/l ; Phosphates (PO43-) 20mg/l ; Sulphates (SO42-) 100mg/l in Water | 100 | ml | 6 | Yes |
| D371.40.W.L5 | Multi-anion standard - 5 components: Chlorides (Cl-) 40mg/l ; Nitrites (NO2-) 10mg/l ; Nitrates (NO3-) 40mg/l ; Phosphates (PO43-) 20mg/l ; Sulphates (SO42-) 100mg/l in Water | 500 | ml | 6 | Yes |
| E3A7.1K.W.L1 | Multi-anion standard - 6 components: 1000mg/l each of Nitrates (NO3-) ; Chlorides (Cl-) ; Sulphates (SO42-) ; Bromides (Br-) ; Phosphates (PO43-) ; Fluorides (F-) in Water | 100 | ml | 12 | Yes |
| E3A7.K1.W.L1 | Multi-anion standard - 6 components: 100mg/l each of Fluorides (F-) ; Chlorides (Cl-) ; Bromides (Br-) ; Nitrates (NO3-) ; Phosphates (PO43-) ; Sulphates (SO42-) in Water | 100 | ml | 12 | Yes |
| 0F6C.K3.W.L1 | Multi-anion standard - 6 components: Fluorides (F-) 100mg/l ; Chlorides (Cl-) 300mg/l ; Nitrites (NO2-) 50mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 100mg/l ; Sulphates (SO42-) 300mg/l in Water | 100 | ml | 6 | Yes |
| 0F6C.K3.W.L25 | Multi-anion standard - 6 components: Fluorides (F-) 100mg/l ; Chlorides (Cl-) 300mg/l ; Nitrites (NO2-) 50mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 100mg/l ; Sulphates (SO42-) 300mg/l in Water | 250 | ml | 12 | Yes |
| 1521.1K.W.L1 | Multi-anion standard - 7 components: 1000mg/l each of Fluorides (F-) ; Chlorides (Cl-) ; Nitrites (NO2-) ; Bromides (Br-) ; Nitrates (NO3-) ; Sulphates (SO42-) ; Phosphates (PO43-) in Water | 100 | ml | 12 | Yes |
| 1521.1K.W.L25 | Multi-anion standard - 7 components: 1000mg/l each of Fluorides (F-) ; Chlorides (Cl-) ; Nitrites (NO2-) ; Bromides (Br-) ; Nitrates (NO3-) ; Sulphates (SO42-) ; Phosphates (PO43-) in Water | 250 | ml | 12 | Yes |
| ACE63.25.W.L1 | Multi-anion standard - 7 components: Fluorides 5mg/l; Chlorides 10mg/l; Nitrites 15mg/l; Bromides 25mg/l; Nitrates 25mg/l; Phosphates 40mg/l; Sulphates 30mg/l in Water | 100 | ml | 6 | Yes |
| ACE63.25.W.L5 | Multi-anion standard - 7 components: Fluorides 5mg/l; Chlorides 10mg/l; Nitrites 15mg/l; Bromides 25mg/l; Nitrates 25mg/l; Phosphates 40mg/l; Sulphates 30mg/l in Water | 500 | ml | 6 | Yes |
| 1521.10.W.L1 | Multi-anion standard - 7 components: 10mg/l each of Bromides (Br-) ; Chlorides (Cl-) ; Fluorides (F-) ; Nitrates (NO3-) ; Nitrites (NO2-) ; Phosphates (PO43-) ; Sulphates (SO42-) in Water | 100 | ml | 6 | Yes |
| 1521.10.W.L5 | Multi-anion standard - 7 components: 10mg/l each of Bromides (Br-) ; Chlorides (Cl-) ; Fluorides (F-) ; Nitrates (NO3-) ; Nitrites (NO2-) ; Phosphates (PO43-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| 7344.K1.W.L1 | Multi-anion standard - 7 components: Chlorides (Cl-) 100mg/l ; Fluorides (F-) 25mg/l ; Sulphates (SO42-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Phosphates (PO43-) 100mg/l in Water | 100 | ml | 6 | Yes |
| 7344.K1.W.L25 | Multi-anion standard - 7 components: Chlorides (Cl-) 100mg/l ; Fluorides (F-) 25mg/l ; Sulphates (SO42-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Phosphates (PO43-) 100mg/l in Water | 250 | ml | 6 | Yes |
| 7344.K1.W.L5 | Multi-anion standard - 7 components: Chlorides (Cl-) 100mg/l ; Fluorides (F-) 25mg/l ; Sulphates (SO42-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Phosphates (PO43-) 100mg/l in Water | 500 | ml | 6 | Yes |

## Cation Standards

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 4C79.1K.W.L1 | Multi-cation standard - 4 components: 1000mg/l each of Sodium (Na+) ; Potassium (K+) ; Magnesium (Mg2+) ; Calcium (Ca2+) in Water | 100 | ml | 12 | Yes |
| 1A15.K1.W.L1 | Multi-cation standard - 5 components: 100mg/l each of Ammonium (NH4+) ; Magnesium (Mg2+) ; Calcium (Ca2+) ; Sodium (Na+) ; Potassium (K+) in Water | 100 | ml | 12 | Yes |
| A3DCF.40.01N.L1 | Multi-cation standard - 6 components: Lithium 10mg/l; Sodium 20mg/l; Ammonium 40mg/l; Calcium 40mg/l; Magnesium 20mg/l; Potassium 20mg/l in Nitric Acid 0.1% | 100 | ml | 6 | Yes |
| A3DCF.40.01N.L5 | Multi-cation standard - 6 components: Lithium 10mg/l; Sodium 20mg/l; Ammonium 40mg/l; Calcium 40mg/l; Magnesium 20mg/l; Potassium 20mg/l in Nitric Acid 0.1% | 500 | ml | 6 | Yes |
| A7A40.5.01N.L1 | Multi-cation standard - 6 components: Lithium 0.5mg/l; Sodium 2mg/l; Ammonium 2.5mg/l; Potassium 5mg/l; Magnesium 2.5mg/l; Calcium 5mg/l in Nitric Acid 0.1% | 100 | ml | 6 | Yes |
| A7A40.5.01N.L5 | Multi-cation standard - 6 components: Lithium 0.5mg/l; Sodium 2mg/l; Ammonium 2.5mg/l; Potassium 5mg/l; Magnesium 2.5mg/l; Calcium 5mg/l in Nitric Acid 0.1% | 500 | ml | 6 | Yes |

## Eluent Concentrates

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| EL001.W.L1 | 0.5M Na2CO3 in H2O eluent concentrate for IC | 100 | ml | 24 | No |
| EL001.W.L5 | 0.5M Na2CO3 in H2O eluent concentrate for IC | 500 | ml | 24 | No |
| EL002.W.L1 | 0.5M NaHCO3 in H2O eluent concentrate for IC | 100 | ml | 24 | No |
| EL002.W.L5 | 0.5M NaHCO3 in H2O eluent concentrate for IC | 500 | ml | 24 | No |
| EL003.W.L1 | 0.22M Na2CO3 /0.28M NaHCO3 eluent concentrate for IC | 100 | ml | 24 | No |
| EL003.W.L5 | 0.22M Na2CO3 /0.28M NaHCO3 eluent concentrate for IC | 500 | ml | 24 | No |
| EL004.W.L1 | 0.18M Na2CO3 / 0.17M NaHCO3 eluent concentrate for IC | 100 | ml | 24 | No |
| EL004.W.L5 | 0.18M Na2CO3 / 0.17M NaHCO3 eluent concentrate for IC | 500 | ml | 24 | No |
| EL005.W.L1 | 0.35M Na2CO3 / 0.10M NaHCO3 eluent concentrate for IC | 100 | ml | 24 | No |
| EL005.W.L5 | 0.35M Na2CO3 / 0.10M NaHCO3 eluent concentrate for IC | 500 | ml | 24 | No |
| EL008.W.L1 | 0.5M Methanesulfonic acid eluent concentrate for IC | 100 | ml | 24 | No |
| EL008.W.L5 | 0.5M Methanesulfonic acid eluent concentrate for IC | 500 | ml | 24 | No |

## Water for Ion Chromatography

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| CIW.1L | Water for Ion Chromatography | 1000 | ml | 12 | No |

# Standards equivalent to

# Standards equivalent to

All Standards equivalent to ... produced by CPAchem use high-purity metals or salts in sub-boiling distilled acids. The Standards are produced and calibrated under CPAchem's quality system that is:

- ISO 9001 certified
- accredited according to ISO/IEC 17025 - Testing
- accredited according to ISO/IEC 17034 - Reference Material Producer

# Standards equivalent to Agilent

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 190064800.L1 | Standard Solution 4 components; Al 5000mg/l ; Ca 5000mg/l ; Mg 5000mg/l ; Fe 2000mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 6610030500.L1 | Calibration mix 1 for AA and ICP-OES - 4 components; 100mg/l each of Mo ; Sb ; Sn ; Ti in HNO3 2% ; HF 0.5% | 100 | ml | 12 | Yes |
| 6610030700.L1 | Calibration Mix Majors 5 components; 500mg/l each of Ca ; Fe ; K ; Mg ; Na in HNO3 5% | 100 | ml | 12 | Yes |
| 6610030700.L5 | Calibration Mix Majors 5 components; 500mg/l each of Ca ; Fe ; K ; Mg ; Na in HNO3 5% | 500 | ml | 12 | Yes |
| 5188-6564.L1 | ICP-MS Stock Tuning Solution- 5 components; 10mg/l each of Li ; Y ; Ce ; Co ; Tl in HNO3 2% | 100 | ml | 12 | Yes |
| 5190-0465.L1 | ICP-MS tuning solution- 6 components; 10ug/ml each of Li ; Mg ; Y ; Ce ; Tl ; Co in HNO3 2% | 100 | ml | 12 | Yes |
| 5185-5959.L5 | Tuning Solution for ICP-MS 6 components: 1ug/l each of Li ; Mg ; Y ; Ce ; Tl ; Co in HNO3 2% | 500 | ml | 4 | Yes |
| 5185-5959.L1 | Tuning Solution for ICP-MS 6 components: 1ug/l each of Li ; Mg ; Y ; Ce ; Tl ; Co in HNO3 2% | 100 | ml | 4 | Yes |
| 6610030400.L1 | ICP internal standard - 6 components; 100mg/l each of Bi ; In ; 6Li ; Sc ; Tb ; Y in HNO3 5% | 100 | ml | 12 | Yes |
| 51834681.L1 | Agilent Environmental Internal Standard - 7 components; 10ug/ml each of Bi ; Ge ; In ; Sc ; Tb ; Y ; Li in HNO3 5% | 100 | ml | 6 | Yes |
| 5183-4681.L1 | Standard Solution 7 components; 10ug/ml each of 6Li ; Sc ; Ge ; Y ; In ; Tb ; Bi in HNO3 5% | 100 | ml | 12 | Yes |
| B55E.10.N.L1 | Standard Solution 7 components; 10ug/ml each of 6Li ; Sc ; Ge ; Y ; In ; Tb ; Bi in HNO3 5% | 100 | ml | 12 | Yes |
| 5188-6524-2.L1 | PA Tuning Solution 2 - 8 components; Ge 10mg/l ; Mo 10mg/l ; Pd 10mg/l ; Ru 10mg/l ; Sb 10mg/l ; Sn 10mg/l ; Ir 5mg/l ; Ti 5mg/l in HCl 5% | 100 | ml | 12 | Yes |
| E738.10.10NtrC.L1 | Internal standard mix for ICP-MS systems - 8 components; 10ug/ml each of 6Li ; Sc ; Ge ; Rh ; In ; Tb ; Lu ; Bi in HNO3 10% ; HCl tr% | 100 | ml | 12 | Yes |
| 190024400.L1 | Tuning Solution for ICP/MS - 9 components; 10mg/l each of Ba ; Be ; Ce ; Co ; In ; Mg ; Pb ; Th ; Tl in HNO3 2% | 100 | ml | 12 | Yes |
| F973.10.2N.L1 | Tuning Solution for ICP/MS - 9 components; 10mg/l each of Ba ; Be ; Ce ; Co ; In ; Mg ; Pb ; Th ; Tl in HNO3 2% | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 8500-6948.L1 | Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10% ; HNO3 1% | 100 | ml | 12 | Yes |
| 5188-6527.L1 | 6020 Interference Check Solution B for ICP/MS - 11 components; Cr 20ug/ml ; Co 20ug/ml ; Cu 20ug/ml ; Mn 20ug/ml ; Ni 20ug/ml ; V 20ug/ml ; As 10ug/ml ; Cd 10ug/ml ; Se 10ug/ml ; Zn 10ug/ml ; Ag 5ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| 97B1.5.5N.L1 | 6020 Interference Check Solution B for ICP/MS - 11 components; Cr 20ug/ml ; Co 20ug/ml ; Cu 20ug/ml ; Mn 20ug/ml ; Ni 20ug/ml ; V 20ug/ml ; As 10ug/ml ; Cd 10ug/ml ; Se 10ug/ml ; Zn 10ug/ml ; Ag 5ug/ml in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 5188-6526.L1 | 6020 Interference Check Solution A for ICP-MS systems 12 components; Cl- 20000ug/ml ; Ca 3000ug/ml ; Fe 2500ug/ml ; Na 2500ug/ml ; C 2000ug/ml ; Al 1000ug/ml ; Mg 1000ug/ml ; P 1000ug/ml ; K 1000ug/ml ; S 1000ug/ml ; Mo 20ug/ml ; Ti 20ug/ml in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 5188-6526.L5 | 6020 Interference Check Solution A for ICP-MS systems 12 components; Cl- 20000ug/ml ; Ca 3000ug/ml ; Fe 2500ug/ml ; Na 2500ug/ml ; C 2000ug/ml ; Al 1000ug/ml ; Mg 1000ug/ml ; P 1000ug/ml ; K 1000ug/ml ; S 1000ug/ml ; Mo 20ug/ml ; Ti 20ug/ml in HNO3 5% ; HF tr% | 500 | ml | 12 | Yes |
| 95CD.1K.5NtrF.L1 | 6020 Interference Check Solution A for ICP-MS systems 12 components; Cl- 20000ug/ml ; Ca 3000ug/ml ; Fe 2500ug/ml ; Na 2500ug/ml ; C 2000ug/ml ; Al 1000ug/ml ; Mg 1000ug/ml ; P 1000ug/ml ; K 1000ug/ml ; S 1000ug/ml ; Mo 20ug/ml ; Ti 20ug/ml in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 8500-6942.L1 | Multi-element calibration standard-4B - 12 components; 10ug/ml each of B ; Ge ; Mo ; Nb ; P ; Re ; S ; Si ; Ta ; Ti ; W ; Zr in HNO3 2%/ tr. HF | 100 | ml | 12 | Yes |
| 6610030100.L1 | ICP-OES Wavelength calibration solution 15 components; Al 5ug/ml ; As 5ug/ml ; Ba 5ug/ml ; Cd 5ug/ml ; Co 5ug/ml ; Cr 5ug/ml ; Cu 5ug/ml ; Mn 5ug/ml ; Mo 5ug/ml ; Ni 5ug/ml ; Pb 5ug/ml ; Se 5ug/ml ; Sr 5ug/ml ; Zn 5ug/ml ; K 50ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| 6610030100.L5 | ICP-OES Wavelength calibration solution 15 components; Al 5ug/ml ; As 5ug/ml ; Ba 5ug/ml ; Cd 5ug/ml ; Co 5ug/ml ; Cr 5ug/ml ; Cu 5ug/ml ; Mn 5ug/ml ; Mo 5ug/ml ; Ni 5ug/ml ; Pb 5ug/ml ; Se 5ug/ml ; Sr 5ug/ml ; Zn 5ug/ml ; K 50ug/ml in HNO3 5% | 500 | ml | 12 | Yes |
| 6610030000.L1 | ICP-OES Wavelength Calibration Solution Concentrate 15 components; Al 50ug/ml ; As 50ug/ml ; Ba 50ug/ml ; Cd 50ug/ml ; Co 50ug/ml ; Cr 50ug/ml ; Cu 50ug/ml ; Mn 50ug/ml ; Mo 50ug/ml ; Ni 50ug/ml ; Pb 50ug/ml ; Se 50ug/ml ; Sr 50ug/ml ; Zn 50ug/ml ; K 500ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| 6610030000.L5 | ICP-OES Wavelength Calibration Solution Concentrate 15 components; Al 50ug/ml ; As 50ug/ml ; Ba 50ug/ml ; Cd 50ug/ml ; Co 50ug/ml ; Cr 50ug/ml ; Cu 50ug/ml ; Mn 50ug/ml ; Mo 50ug/ml ; Ni 50ug/ml ; Pb 50ug/ml ; Se 50ug/ml ; Sr 50ug/ml ; Zn 50ug/ml ; K 500ug/ml in HNO3 5% | 500 | ml | 12 | Yes |
| 8500-6944.L1 | Multi-element calibration standard-1: 17 components; 10ug/ml each of Ce ; Dy ; Er ; Eu ; Gd ; Ho ; La ; Lu ; Nd ; Pr ; Sc ; Sm ; Tb ; Th ; Tm ; Y ; Yb in HNO3 5% | 100 | ml | 12 | Yes |
| 8500-6944.L5 | Multi-element calibration standard-1: 17 components; 10ug/ml each of Ce ; Dy ; Er ; Eu ; Gd ; Ho ; La ; Lu ; Nd ; Pr ; Sc ; Sm ; Tb ; Th ; Tm ; Y ; Yb in HNO3 5% | 500 | ml | 12 | Yes |
| 6610030600.L1 | Calibration mix 2 for AA and ICP-OES - 18 components; 100mg/l each of Ag ; Al ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Mn ; Ni ; Pb ; Se ; Th ; Tl ; U ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 5183-4688.L1 | Agilent/ Varian Environmental Calibration Standard 25 components; Ca 1000ug/ml ; Fe 1000ug/ml ; K 1000ug/ml ; Mg 1000ug/ml ; Na 1000ug/ml ; Ag 10ug/ml ; Al 10ug/ml ; As 10ug/ml ; Ba 10ug/ml ; Be 10ug/ml ; Cd 10ug/ml ; Co 10ug/ml ; Cr 10ug/ml ; Cu 10ug/ml ; Mn 10ug/ml ; Mo 10ug/ml ; Ni 10ug/ml ; Pb 10ug/ml ; Sb 10ug/ml ; Se 10ug/ml ; Tl 10ug/ml ; V 10ug/ml ; Zn 10ug/ml ; Th 10ug/ml ; U 10ug/ml in HNO3 10% | 100 | ml | 12 | Yes |
| 5188-6524-1.L1 | PA Tuning Solution 1 - 26 components; As 20mg/l ; Be 20mg/l ; Cd 20mg/l ; Zn 20mg/l ; Mg 10mg/l ; Ni 10mg/l ; Pb 10mg/l ; Al 5mg/l ; Ba 5mg/l ; Bi 5mg/l ; Co 5mg/l ; Cr 5mg/l ; Cu 5mg/l ; In 5mg/l ; 6Li 5mg/l ; Lu 5mg/l ; Mn 5mg/l ; Na 5mg/l ; Sc 5mg/l ; Sr 5mg/l ; Th 5mg/l ; Tl 5mg/l ; U 5mg/l ; V 5mg/l ; Y 2.5mg/l ; Yb 2.5mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| 51834682.L1 | Environmental Initial Calibration Verification - 26 components; Ca 1000ug/ml ; Fe 1000ug/ml ; K 1000ug/ml ; Mg 1000ug/ml ; Na 1000ug/ml ; Sr 1000ug/ml ; Ag 10ug/ml ; Al 10ug/ml ; As 10ug/ml ; Ba 10ug/ml ; Be 10ug/ml ; Cd 10ug/ml ; Co 10ug/ml ; Cr 10ug/ml ; Cu 10ug/ml ; Mn 10ug/ml ; Mo 10ug/ml ; Ni 10ug/ml ; Pb 10ug/ml ; Sb 10ug/ml ; Se 10ug/ml ; Tl 10ug/ml ; V 10ug/ml ; Zn 10ug/ml ; Th 10ug/ml ; U 10ug/ml in HNO3 10% ; HF 0.1% | 100 | ml | 6 | Yes |
| 5183-4682.L1 | Initial Calibration Verification Standard - 26 components; Ca 1000ug/ml ; Fe 1000ug/ml ; K 1000ug/ml ; Mg 1000ug/ml ; Na 1000ug/ml ; Sr 1000ug/ml ; Ag 10ug/ml ; Al 10ug/ml ; As 10ug/ml ; Ba 10ug/ml ; Be 10ug/ml ; Cd 10ug/ml ; Co 10ug/ml ; Cr 10ug/ml ; Cu 10ug/ml ; Mn 10ug/ml ; Mo 10ug/ml ; Ni 10ug/ml ; Pb 10ug/ml ; Sb 10ug/ml ; Se 10ug/ml ; Tl 10ug/ml ; V 10ug/ml ; Zn 10ug/ml ; Th 10ug/ml ; U 10ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| 190065000.L1 | QCSTD-27 Quality Control Standard 27 components; 100ug/ml each of Al ; Sb ; As ; Ba ; Be ; B ; Cd ; Ca ; Cr ; Co ; Cu ; Fe ; Pb ; Mg ; Mn ; Mo ; Ni ; K ; Se ; Si ; Ag ; Sr ; Na ; Tl ; Ti ; V ; Zn in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| 8500-6940.L1 | Multi-element calibration standard-2A for ICP-MS - 28 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Ca ; Cd ; Co ; Cr ; Cs ; Cu ; Fe ; Ga ; Hg ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Rb ; Se ; Sr ; Tl ; U ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |

# Standards Equivalent to Perkin Elmer

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| N0691581.L1 | Calcium Stray Light Standard - Calcium (Ca) 10 g/l in 5% HNO3 | 100 | ml | 12 | Yes |
| N8145060.L1 | NexION AFT Single-Element Solution - 1 component; Fe 2ug/l in HNO3 2% | 100 | ml | 6 | Yes |
| N9300253.L1 | Environmental Standard - 1 component; Hg 10mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| N9303949.L1 | 5 mg/l Mercury in 5% HNO3 - 1 component; Hg 5mg/l in HNO3 5% | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| N9303954.L1 | 8 mg/l Mercury in 5% HNO3, 1 component; Hg 8mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| N9300223.L05 | Environmental EPA Standard - 1 component; Hg 100mg/l in HNO3 5% | 50 | ml | 12 | Yes |
| N9300223.L1 | Environmental EPA Standard - 1 component; Hg 100mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| N8145052.L5 | NexION KED Setup Solution - 2 components; Co 10ug/l ; Ce 1ug/l in HCl 1% | 500 | ml | 6 | Yes |
| N8145052.L1 | NexION KED Setup Solution - 2 components; Co 10ug/l ; Ce 1ug/l in HCl 1% | 100 | ml | 6 | Yes |
| N9307806.L1 | Environmental Standard - 2 components; 1000mg/l each of Al ; Fe in HNO3 5% | 100 | ml | 12 | Yes |
| N9307114.L1 | Multi Element Solution - 3 components; 1000mg/l each of K ; Na ; P in HNO3 5% | 100 | ml | 12 | Yes |
| N9307114.L5 | Multi Element Solution - 3 components; 1000mg/l each of K ; Na ; P in HNO3 5% | 500 | ml | 12 | Yes |
| N0691580.L1 | Low UV Standard - 3 components; 10ug/ml each of Al ; P ; S in HNO3 2% | 100 | ml | 6 | Yes |
| N0691580.L25 | Low UV Standard - 3 components; 10ug/ml each of Al ; P ; S in HNO3 2% | 250 | ml | 6 | Yes |
| N0691580.L5 | Low UV Standard - 3 components; 10ug/ml each of Al ; P ; S in HNO3 2% | 500 | ml | 6 | Yes |
| N9307113.L1 | Multi Element Solution - 4 components; 1000mg/l each of Al ; Ca ; Fe ; Mg in HNO3 5% | 100 | ml | 12 | Yes |
| N9307113.L5 | Multi Element Solution - 4 components; 1000mg/l each of Al ; Ca ; Fe ; Mg in HNO3 5% | 500 | ml | 12 | Yes |
| N9300215.L1 | Alternate Metals II - 4 components; Ca 500mg/l ; Na 500mg/l ; K 100mg/l ; Mg 100mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| N9303952.L5 | Alternate Metals II - 4 components; Ca 500mg/l ; Na 500mg/l ; K 100mg/l ; Mg 100mg/l in HNO3 2% | 500 | ml | 12 | Yes |
| N9300226.L1 | Primary Interferents/ Interferents A - 4 components; Al 5000mg/l ; Ca 5000mg/l ; Mg 5000mg/l ; Fe 2000mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| N9300226.L5 | Primary Interferents/ Interferents A - 4 components; Al 5000mg/l ; Ca 5000mg/l ; Mg 5000mg/l ; Fe 2000mg/l in HNO3 5% | 500 | ml | 12 | Yes |
| N9307805.L1 | Environmental Standards - 4 components; 1000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 100 | ml | 12 | Yes |
| N9307805.L5 | Environmental Standards - 4 components; 1000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 500 | ml | 12 | Yes |
| N9300218.L1 | Instrument Calibration Standard 1 - 4 components; 5000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 100 | ml | 12 | Yes |
| N9300218.L5 | Instrument Calibration Standard 1 - 4 components; 5000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 500 | ml | 12 | Yes |
| N9300217.L1 | Secondary Drinking Water Metals - 4 components; Zn 500mg/l ; Cu 100mg/l ; Fe 30mg/l ; Mn 5mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| N9303818.L1 | Instrument Calibration Standard 3 - 5 components; 1000mg/l each of Ca ; Fe ; K ; Mg ; Na in HNO3 5% | 100 | ml | 12 | Yes |
| N9303822.L1 | Instrument Check Standard 3 - 5 components; 200mg/l each of Ca ; Fe ; K ; Mg ; Na in HNO3 2% | 100 | ml | 12 | Yes |
| N9307115.L1 | Multi-Element Solution - 5 components; 1000mg/l each of Mo ; Sb ; Sn ; W ; Zr in HNO3 5% | 100 | ml | 12 | Yes |
| N9307115.L5 | Multi-Element Solution - 5 components; 1000mg/l each of Mo ; Sb ; Sn ; W ; Zr in HNO3 5% | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| N9300221.L1 | Instrument Calibration Standard 4 - 5 components; As 100ug/ml ; Tl 100ug/ml ; Cd 50ug/ml ; Se 50ug/ml ; Pb 30ug/ml in HNO3 5% | 100 | ml | 6 | Yes |
| N8122017.L1 | Elan 5000 Detection Limit Solution - 6 components; 10ug/l each of Be ; Co ; Ge ; In ; Tl ; U in HNO3 2% | 100 | ml | 6 | Yes |
| N8122017.L5 | Elan 5000 Detection Limit Solution - 6 components; 10ug/l each of Be ; Co ; Ge ; In ; Tl ; U in HNO3 2% | 500 | ml | 6 | Yes |
| 7F97.K1.15C.L1 | USP 232 Elemental Impurities Solution 2 - 6 components; 100mg/kg each of Ir ; Os ; Pd ; Pt ; Rh ; Ru in HCl 15% | 100 | ml | 12 | Yes |
| N9303957B.L1 | USP 232 Elemental Impurities Solution 2 - 6 components; 100mg/kg each of Ir ; Os ; Pd ; Pt ; Rh ; Ru in HCl 15% | 100 | ml | 12 | Yes |
| N9303834.L1 | Multi-Element Internal Standard 7 components; 10ug/ml each of Bismuth ; Holmium ; Indium ; Lithium isotope 6 ; Scandium ; Terbium ; Yttrium in Nitric Acid 2% | 100 | ml | 12 | Yes |
| N9303832.L1 | Internal Standard Mix - 7 components; 10ug/ml each of 6Li ; Sc ; Ge ; Y ; In ; Tb ; Bi in HNO3 5% | 100 | ml | 12 | Yes |
| N9300280.L1 | Quality Control Standard, 7A Elements; K 1000mg/l ; Ag 50mg/l ; Al 100mg/l ; B 100mg/l ; Ba 100mg/l ; Na 100mg/l ; Si 500mg/l in HNO3 5%/ trHF | 100 | ml | 12 | Yes |
| N9303832.L5 | Internal Standard Mix - 7 components; 10ug/ml each of 6Li ; Sc ; Ge ; Y ; In ; Tb ; Bi in HNO3 5% | 500 | ml | 12 | Yes |
| N9307808.L1 | Internal Standard Mix - 8 components; Sc 50mg/l ; Ge 20mg/l ; In 10mg/l ; Ir 10mg/l ; 6Li 10mg/l ; Rh 10mg/l ; Tb 10mg/l ; Y 10mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| N9302946.L1 | VIS WAVECAL Solution - 8 components; K 50mg/l ; La 10mg/l ; Li 10mg/l ; Mn 10mg/l ; Na 10mg/l ; Sr 10mg/l ; Ba 1mg/l ; Ca 1mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| N9302946.L25 | VIS WAVECAL Solution - 8 components; K 50mg/l ; La 10mg/l ; Li 10mg/l ; Mn 10mg/l ; Na 10mg/l ; Sr 10mg/l ; Ba 1mg/l ; Ca 1mg/l in HNO3 2% | 250 | ml | 12 | Yes |
| N9300216.L1 | Primary Drinking Water Metals - 8 components; Ba 100mg/l ; Ag 10mg/l ; As 10mg/l ; Cr 10mg/l ; Hg 10mg/l ; Pb 10mg/l ; Cd 5mg/l ; Se 5mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| N8145051.L1 | NexION Setup Solution - 8 components; 1ug/l each of Be ; Ce ; Fe ; In ; Li ; Mg ; Pb ; U in HNO3 1% | 100 | ml | 6 | Yes |
| N8145051.L5 | NexION Setup Solution - 8 components; 1ug/l each of Be ; Ce ; Fe ; In ; Li ; Mg ; Pb ; U in HNO3 1% | 500 | ml | 6 | Yes |
| N9300241.L1 | TCLP Standard 1 - 8 components; Ba 500mg/l ; Ag 25mg/l ; As 25mg/l ; Cr 25mg/l ; Pb 25mg/l ; Hg 100mg/l ; Cd 5mg/l ; Se 5mg/l in HNO3 2% | 100 | ml | 6 | Yes |
| N9300241.L5 | TCLP Standard 1 - 8 components; Ba 500mg/l ; Ag 25mg/l ; As 25mg/l ; Cr 25mg/l ; Pb 25mg/l ; Hg 100mg/l ; Cd 5mg/l ; Se 5mg/l in HNO3 2% | 500 | ml | 6 | Yes |
| N8125040.L1 | SmartTune Solution for Standard ELANs/DRC-e - 9 components; 10mg/l each of Ba ; Be ; Ce ; Co ; In ; Mg ; Pb ; Rh ; U in HNO3 1% | 100 | ml | 6 | Yes |
| N8125030.1L | Elan 9000/6100 Setup/Stability/Masscal Solution - 9 components; 10ug/l each of Ba ; Ce ; Cd ; Cu ; In ; Pb ; Mg ; Rh ; U in HNO3 1% | 1000 | ml | 6 | Yes |
| N8125030.L1 | Elan 9000/6100 Setup/Stability/Masscal Solution - 9 components; 10ug/l each of Ba ; Ce ; Cd ; Cu ; In ; Pb ; Mg ; Rh ; U in HNO3 1% | 100 | ml | 6 | Yes |
| N8125030.L5 | Elan 9000/6100 Setup/Stability/Masscal Solution - 9 components; 10ug/l each of Ba ; Ce ; Cd ; Cu ; In ; Pb ; Mg ; Rh ; U in HNO3 1% | 500 | ml | 6 | Yes |
| N9300231.L1 | Multi-Element Solution1 - 9 components; 10mg/l each of Be ; Bi ; Ce ; Co ; In ; Mg ; Ni ; Pb ; U in HNO3 2% | 100 | ml | 12 | Yes |

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| N9300231.L5 | Multi-Element Solution1 - 9 components; 10mg/l each of Be ; Bi ; Ce ; Co ; In ; Mg ; Ni ; Pb ; U in HNO3 2% | 500 | ml | 12 | Yes |
| N0691579.L1 | Mixed Calibration Standard 10 components: As 50ug/ml ; K 50ug/ml ; La 10ug/ml ; Li 10ug/ml ; Mn 10ug/ml ; Ni 10ug/ml ; Sr 10ug/ml ; Zn 10ug/ml ; Ba 1ug/ml ; Mg 1ug/ml in HNO3 2% | 100 | ml | 12 | Yes |
| N0691579.L5 | Mixed Calibration Standard 10 components: As 50ug/ml ; K 50ug/ml ; La 10ug/ml ; Li 10ug/ml ; Mn 10ug/ml ; Ni 10ug/ml ; Sr 10ug/ml ; Zn 10ug/ml ; Ba 1ug/ml ; Mg 1ug/ml in HNO3 2% | 500 | ml | 12 | Yes |
| N8125041.1L | SmartTune Solution for DRC/DRCplus/DRC II - 10 components; Ba 10ug/l ; Be 1ug/l ; Ce 1ug/l ; Co 1ug/l ; In 1ug/l ; Fe 1ug/l ; Pb 1ug/l ; Mg 1ug/l ; Th 1ug/l ; U 1ug/l in HNO3 0.5% | 1000 | ml | 6 | Yes |
| N8125041.L5 | SmartTune Solution for DRC/DRCplus/DRC II - 10 components; Ba 10ug/l ; Be 1ug/l ; Ce 1ug/l ; Co 1ug/l ; In 1ug/l ; Fe 1ug/l ; Pb 1ug/l ; Mg 1ug/l ; Th 1ug/l ; U 1ug/l in HNO3 0.5% | 500 | ml | 6 | Yes |
| N9300234.L1 | Multi-Element Solution 4 - 10 components; 10mg/l each of Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Sb ; Sn ; Te in HCl 10% ; HNO3 1% | 100 | ml | 12 | Yes |
| N9303957A.L1 | USP Elemental Impurities Solution 1 - 10 components; Cu 2500mg/kg ; Mn 2500mg/kg ; Cr 250mg/kg ; Mo 250mg/kg ; Ni 250mg/kg ; V 250mg/kg ; As 15mg/kg ; Hg 15mg/kg ; Pb 10mg/kg ; Cd 5mg/kg in HNO3 5% | 100 | ml | 6 | Yes |
| N0681470.L1 | UV Wavecal Solution - 11 components; As 20mg/l ; K 100mg/l ; La 20mg/l ; Li 20mg/l ; Mn 20mg/l ; Mo 20mg/l ; Na 20mg/l ; Ni 20mg/l ; P 100mg/l ; S 100mg/l ; Sc 20mg/l in HCl 2% | 100 | ml | 6 | Yes |
| N0681470.L5 | UV Wavecal Solution - 11 components; As 20mg/l ; K 100mg/l ; La 20mg/l ; Li 20mg/l ; Mn 20mg/l ; Mo 20mg/l ; Na 20mg/l ; Ni 20mg/l ; P 100mg/l ; S 100mg/l ; Sc 20mg/l in HCl 2% | 500 | ml | 6 | Yes |
| N9303843.L1 | Tuning Solution 1 - 12 components; 10mg/l each of Ba ; Be; Ce ; Co ; In ; Li ; Mg ; Pb ; Rh ; Tl ; U ; Y in HNO3 2% ; HCl 5% | 100 | ml | 6 | Yes |
| 4DA0.1K.5NtrF.L1 | Interference Check Solution 1 - 12 components; Chlorides (Cl-) 10 000mg/l ; Carbon (C) 2000mg/l ; Aluminium (Al) 1000mg/l ; Calcium (Ca) 1000mg/l ; Iron (Fe) 1000mg/l ; Potassium (K) 1000mg/l ; Magnesium (Mg) 1000mg/l ; Sodium (Na) 1000mg/l ; Phosphorus (P) 1000mg/l ; Sulphur (S) 1000mg/l ; Molybdenum (Mo) 20mg/l ; Titanium (Ti) 20mg/l in Nitric Acid 5% ; Hydrofluoric acid tr% | 100 | ml | 6 | Yes |
| N9303828.L1 | Interference Check Solution 1 - 12 components; Chlorides (Cl-) 10 000mg/l ; Carbon (C) 2000mg/l ; Aluminium (Al) 1000mg/l ; Calcium (Ca) 1000mg/l ; Iron (Fe) 1000mg/l ; Potassium (K) 1000mg/l ; Magnesium (Mg) 1000mg/l ; Sodium (Na) 1000mg/l ; Phosphorus (P) 1000mg/l ; Sulphur (S) 1000mg/l ; Molybdenum (Mo) 20mg/l ; Titanium (Ti) 20mg/l in Nitric Acid 5% ; Hydrofluoric acid tr% | 100 | ml | 6 | Yes |
| N9303828.L5 | Interference Check Solution 1 - 12 components; Chlorides (Cl-) 10 000mg/l ; Carbon (C) 2000mg/l ; Aluminium (Al) 1000mg/l ; Calcium (Ca) 1000mg/l ; Iron (Fe) 1000mg/l ; Potassium (K) 1000mg/l ; Magnesium (Mg) 1000mg/l ; Sodium (Na) 1000mg/l ; Phosphorus (P) 1000mg/l ; Sulphur (S) 1000mg/l ; Molybdenum (Mo) 20mg/l ; Titanium (Ti) 20mg/l in Nitric Acid 5% ; Hydrofluoric acid tr% | 500 | ml | 6 | Yes |
| N8125035.L1 | ELAN 6100 DRC Setup/Stab/Masscal Solution - 12 components; Ba 10ug/l ; Al 1ug/l ; Cd 1ug/l ; Ce 1ug/l ; Cr 1ug/l ; Cu 1ug/l ; In 1ug/l ; Pb 1ug/l ; Mg 1ug/l ; Mn 1ug/l ; Rh 1ug/l ; Th 1ug/l in HNO3 0.5% | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| N8125035.L5 | ELAN 6100 DRC Setup/Stab/Masscal Solution - 12 components; Ba 10ug/l ; Al 1ug/l ; Cd 1ug/l ; Ce 1ug/l ; Cr 1ug/l ; Cu 1ug/l ; In 1ug/l ; Pb 1ug/l ; Mg 1ug/l ; Mn 1ug/l ; Rh 1ug/l; Th 1ug/l in HNO3 0.5% | 500 | ml | 6 | Yes |
| N9300235.L1 | Multi-Element Solution 5 - 12 components; 10mg/l each of B ; Ge ; Mo ; Nb ; P ; Re ; S ; Si ; Ta ; Ti ; W ; Zr in HNO3 2% | 100 | ml | 12 | Yes |
| N0582152.L5 | UV Wavecal Solution - 12 components; K 100ug/ml ; P 100ug/ml ; S 100ug/ml ; As 20ug/ml ; La 20ug/ml ; Li 20ug/ml ; Mn 20ug/ml ; Mo 20ug/ml ; Na 20ug/ml ; Ni 20ug/ml ; Sc 20ug/ml ; Ca 1ug/ml in HCl 5% | 500 | ml | 6 | Yes |
| N0582152.L1 | UV Wavecal Solution - 12 components; K 100ug/ml ; P 100ug/ml ; S 100ug/ml ; As 20ug/ml ; La 20ug/ml ; Li 20ug/ml ; Mn 20ug/ml ; Mo 20ug/ml ; Na 20ug/ml ; Ni 20ug/ml ; Sc 20ug/ml ; Ca 1ug/ml in HCl 5% | 100 | ml | 6 | Yes |
| N9303827.L1 | Interference A - 12 components; Chlorides (Cl-) 21215mg/l Calcium (Ca) 3000mg/l ; Iron (Fe) 2500mg/l ; Sodium (Na) 2500mg/l ; Carbon (C) 2000mg/l ; Aluminium (Al) 1000mg/l Potassium (K) 1000mg/l ; Magnesium (Mg) 1000mg/l ; Phosphorus (P) 1000mg/l ; Sulphur (S) 1000mg/l ; Molybdenum (Mo) 20mg/l ; Titanium (Ti) 20mg/l in Nitric Acid 5% / trHF | 100 | ml | 6 | Yes |
| N9303946.L1 | Perkin Elmer Pure XIII - 14 components; Al 500mg/l ; V 250mg/l ; As 100mg/l ; Be 100mg/l ; Co 100mg/l ; Cr 100mg/l ; Cu 100mg/l ; Fe 100mg/l ; Mn 100mg/l ; Ni 100mg/l ; Pb 100mg/l ; Zn 100mg/l ; Cd 25mg/l ; Se 25mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| N8145059.L1 | 14 components; 200ug/l each of Al; Ba; Ce ; Co; Cu ; In ; Li ; Mg ; Mn ; Ni ; Pb ; Tb ; U ; Zn in HNO3 2% | 100 | ml | 4 | Yes |
| N9300211.L1 | Trace Metals 1 - 15 components; Al 500mg/l ; V 250mg/l; As 100mg/l ; Be 100mg/l ; Co 100mg/l ; Cr 100mg/l ; Cu 100mg/l ; Fe 100mg/l ; Mn 100mg/l ; Ni 100mg/l ; Pb 100mg/l ; Zn 100mg/l ; Cd 25mg/l ; Se 25mg/l ; Hg 10mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| N9300244.L1 | GFAAS Mixed Standard - 16 components; Al 100mg/l ; As 100mg/l ; Pb 100mg/l ; Sb 100mg/l ; Se 100mg/l ; Tl 100mg/l ; Ba 50mg/l ; Co 50mg/l ; Cu 50mg/l ; Ni 50mg/l ; Cr 20mg/l ; Fe 20mg/l ; Mn 20mg/l ; Ag 10mg/l ; Be 5mg/l ; Cd 5mg/l in HNO3 5% ; HF tr% | 100 | ml | 12 | Yes |
| N9300232.L1 | Universal Data Acquisition Standard 1 - 17 components; 10mg/l each of Ce ; Dy ; Er ; Eu ; Gd ; Ho ; La ; Lu ; Nd ; Pr ; Sm ; Sc ; Tb ; Th ; Tm ; Y ; Yb in HNO3 5% | 100 | ml | 12 | Yes |
| N9300232.L5 | Universal Data Acquisition Standard 1 - 17 components; 10mg/l each of Ce ; Dy ; Er ; Eu ; Gd ; Ho ; La ; Lu ; Nd ; Pr ; Sm ; Sc ; Tb ; Th ; Tm ; Y ; Yb in HNO3 5% | 500 | ml | 12 | Yes |
| N9303839.L1 | Spike Sample Standard I (Water) - 17 components; Fe 500ug/ml ; Ba 250ug/ml ; Zn 250ug/ml ; Co 100ug/ml ; Cr 100ug/ml ; Cu 100ug/ml ; Mn 100ug/ml ; Ni 100ug/ml ; Sb 100ug/ml ; V 100ug/ml ; As 50ug/ml ; Pb 50ug/ml ; Ag 25ug/ml ; Be 25ug/ml ; Cd 25ug/ml ; Se 25ug/ml ; Tl 25ug/ml in HNO3 5% ; HF 0.1% ; C4H6O6 0.1% | 100 | ml | 6 | Yes |
| N9303821.L1 | Instrument Check Standard 1 - 17 components; 10ug/ml each of Ag ; Al ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Mn ; Ni ; Pb ; Sb ; Se ; Tl ; V ; Zn in HNO3 2% ; HF tr% ; C4H6O6 tr% | 100 | ml | 12 | Yes |
| N9307116.L1 | Multi-Element Solution - 17 components; 1000mg/l each of As ; Ba ; Cd ; Be ; Cr ; Co ; Cu ; La ; Pb ; Li ; Mn ; Ni ; Sc ; Sr ; V ; Y ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| N9307116.L5 | Multi-Element Solution - 17 components; 1000mg/l each of As ; Ba ; Cd ; Be ; Cr ; Co ; Cu ; La ; Pb ; Li ; Mn ; Ni ; Sc ; Sr ; V ; Y ; Zn in HNO3 5% | 500 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| N9303816.L1 | Instrument Calibration Standard 1 - 20 components; 20mg/l each of Ag ; Al ; As ; Ba ; Be ; Cd ; Co ; Cr ; Cu ; Mn; Mo ; Ni ; Pb ; Sb ; Se ; Th ; Tl ; U ; V ; Zn in HNO3 5%/ tr Tartaric | 100 | ml | 6 | Yes |
| N9300281.L1 | Quality Control Standard, 21 Elements Pure (Pure XVI) - 100mg/l each of As ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Li ; Mg ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Sr ; Ti ; Tl ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| N9303953.L1 | Initial Calibration Verification Standard - 21 components; Ca 500ug/ml ; Mg 500ug/ml ; K 500ug/ml ; Na 500ug/ml ; Ba 200ug/ml ; Al 200ug/ml ; Fe 100ug/ml ; Sb 60ug/ml ; Co 50ug/ml ; V 50ug/ml ; Ni 40ug/ml ; Cu 25ug/ml ; Zn 20ug/ml ; Mn 15ug/ml ; As 10ug/ml ; Cr 10ug/ml ; Ag 10ug/ml; Tl 10ug/ml ; Cd 5ug/ml ; Se 5ug/ml ; Pb 3ug/ml in HNO3 5% | 100 | ml | 6 | Yes |
| N9303835.L1 | Memory Test 1 - 21 components; Al 1000mg/l ; Ca 1000mg/l ; Fe 1000mg/l ; K 1000mg/l ; Mg 1000mg/l ; Na 1000mg/l ; Ag 20mg/l ; As 20mg/l ; Ba 20mg/l ; Be 20mg/l ; Cd 20mg/l ; Co 20mg/l ; Cr 20mg/l ; Cu 20mg/l ; Mn 20mg/l Ni 20mg/l ; Pb 20mg/l ; Se 20mg/l ; Tl 20mg/l ; V 20mg/l ; Zn 20mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| 9C79.20.5N.L1 | Memory Test 1 - 21 components; Al 1000mg/l ; Ca 1000mg/l ; Fe 1000mg/l ; K 1000mg/l ; Mg 1000mg/l ; Na 1000mg/l ; Ag 20mg/l ; As 20mg/l ; Ba 20mg/l ; Be 20mg/l ; Cd 20mg/l ; Co 20mg/l ; Cr 20mg/l ; Cu 20mg/l ; Mn 20mg/l; Ni 20mg/l ; Pb 20mg/l ; Se 20mg/l ; Tl 20mg/l ; V 20mg/l ; Zn 20mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| N9303941.L1 | Perkin Elmer Pure 4 (Quality Control Standard 23) - 23 components; 1000ug/ml each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd; Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 10% | 100 | ml | 12 | Yes |
| N9303941.L5 | Perkin Elmer Pure 4 (Quality Control Standard 23) - 23 components; 1000ug/ml each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 10% | 500 | ml | 12 | Yes |
| N9303944.L1 | Perkin Elmer Pure 10 - 23 components; As 50ug/l ; B 100ug/l ; Ba 50ug/l ; Be 20ug/l ; Bi 10ug/l ; Ca 35000ug/l; Cd 20ug/l ; Co 25ug/l ; Cr 20ug/l ; Cu 20ug/l ; Fe 100ug/l ; K 3000ug/l ; Mg 15000ug/l ; Mn 30ug/l ; Mo 100ug/l ; Na 8000ug/l ; Ni 50ug/l ; Pb 25ug/l ; Se 10ug/l ; Sr 100ug/l ; Tl 10ug/l ; V 50ug/l ; Zn 50ug/l in HNO3 2% | 100 | ml | 12 | Yes |
| N9303942.L1 | Perkin Elmer Pure 8 - 24 components; 100mg/l each of Al; B ; Ba ; Bi ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Se ; Sr ; Te ; Tl ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| N9301721MS.L1 | Environmental Standard - 26 components; 100mg/l each of Ag ; Al ; As ; Ba ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mg ; Mn; Mo ; Na ; Ni ; Pb ; Sb ; Se ; Sn ; Sr ; Ti ; Tl ; V ; Zn in HNO3 5% | 100 | ml | 6 | Yes |
| N9301721.L1 | Instrument Calibration Standard 2 - 26 components; 100ug/ml each of Ag ; Al ; As ; Ba ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; K ; Mg ; Mn ; Mo ; Na ; Ni ; Pb ; Sb ; Se ; Sn ; Sr ; Ti ; Tl ; V ; Zn in HNO3 5% ; HF tr% ; C4H6O6 tr% | 100 | ml | 12 | Yes |
| N9301720.L1 | Multi-Element Solution 3 with Hg: 30 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cs ; Cu ; Fe ; Ga ; Hg ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Rb ; Se ; Sr ; Tl ; U ; V ; Zn in HNO3 5% | 100 | ml | 6 | Yes |

# Standards Equivalent to Merck

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 115626.L1 | Calibration Standard Earth Alkali Elements (III) - 4 components; 1000mg/l each of Ba ; Ca ; Mg ; Sr in HNO3 5% | 100 | ml | 12 | Yes |
| 109495.L1 | ICP Calibration Standard HCl Soluble Elements (XVII) 7 components; 100mg/l each of Hf ; Ir ; Sb ; Sn ; Ta ; Ti ; Zr in HCl 15%/tr. HF and HNO3 | 100 | ml | 12 | Yes |
| 109491.L1 | Standard Solution 7 components; Cd 10mg/l ; Cr 900mg/l ; Cu 800mg/l ; Ni 200mg/l ; Pb 900mg/l ; Zn 2500mg/l ; Hg 8mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 109482.L1 | ICP Multi-Element Standard Solution XV - 8 components; K 50mg/l ; La 10mg/l ; Li 10mg/l ; Mn 10mg/l ; Na 10mg/l ; Sr 10mg/l ; Ba 1mg/l ; Ca 1mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| 109482.L5 | ICP Multi-Element Standard Solution XV - 8 components; K 50mg/l ; La 10mg/l ; Li 10mg/l ; Mn 10mg/l ; Na 10mg/l ; Sr 10mg/l ; Ba 1mg/l ; Ca 1mg/l in HNO3 2% | 500 | ml | 12 | Yes |
| 1FAC.1.2N.L1 | ICP Multi-Element Standard Solution XV - 8 components; K 50mg/l ; La 10mg/l ; Li 10mg/l ; Mn 10mg/l ; Na 10mg/l ; Sr 10mg/l ; Ba 1mg/l ; Ca 1mg/l in HNO3 2% | 100 | ml | 12 | Yes |
| 109490.L1 | Merck ICP Multi-element standard Solution (XII) - 8 components; 1000mg/l each of As ; Mo ; P ; S ; Si ; W ; V ; Zr in HCl 5% | 100 | ml | 12 | Yes |
| 110322.L1 | IC Multi-element standard VII 9 components; 100mg/l each of Barium (Ba2+) ; Calcium (Ca2+) ; Potassium (K+) ; Lithium (Li+) ; Magnesium (Mg2+) ; Manganese (Mn2+) ; Sodium (Na+) ; Ammonium (NH4+) ; Strontium (Sr2+) in Nitric Acid 0.1% | 100 | ml | 12 | Yes |
| 109494.L1 | ICP Multi-element standard solution IX (9 components in dilute nitric acid; 100mg/l each of As ; Be ; Pb ; Cd ; Cr ; Ni ; Hg ; Se ; Tl) | 100 | ml | 12 | Yes |
| 109481.L1 | ICP multi-element standard solution XIV - 11 components; As 20mg/l ; Na 20mg/l ; Sc 20mg/l ; Li 20mg/l ; Ni 20mg/l ; S 100mg/l ; K 100mg/l ; Mn 20mg/l ; La 20mg/l ; Mo 20mg/l ; P 100mg/l in HCl 2% | 100 | ml | 12 | Yes |
| 109481.L5 | ICP multi-element standard solution XIV - 11 components; As 20mg/l ; Na 20mg/l ; Sc 20mg/l ; Li 20mg/l ; Ni 20mg/l ; S 100mg/l ; K 100mg/l ; Mn 20mg/l ; La 20mg/l ; Mo 20mg/l ; P 100mg/l in HCl 2% | 500 | ml | 12 | Yes |
| 109497.L1 | Merck ICP multi-element standard solution XX 11 components; 10ug/l each of Ba ; Ce ; Ge ; Mg ; Sc ; Tl ; Cd ; Cu ; Pb ; Rh ; Tb in HNO3 1% | 100 | ml | 6 | Yes |
| 109497.L5 | Merck ICP multi-element standard solution XX 11 components; 10ug/l each of Ba ; Ce ; Ge ; Mg ; Sc ; Tl ; Cd ; Cu ; Pb ; Rh ; Tb in HNO3 1% | 500 | ml | 6 | Yes |
| 109411.L1 | ICP Tuning Standard (XXIV) 15 components; Al 50mg/l ; As 50mg/l ; Ba 50mg/l ; Cd 50mg/l ; Co 50mg/l ; Cr 50mg/l ; Cu 50mg/l ; K 500mg/l ; Mn 50mg/l ; Mo 50mg/l ; Ni 50mg/l ; Pb 50mg/l ; Se 50mg/l ; Sr 50mg/l; Zn 50mg/l in HNO3 1% | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 109411.L5 | ICP Tuning Standard (XXIV) 15 components; Al 50mg/l ; As 50mg/l ; Ba 50mg/l ; Cd 50mg/l ; Co 50mg/l ; Cr 50mg/l ; Cu 50mg/l ; K 500mg/l ; Mn 50mg/l ; Mo 50mg/l ; Ni 50mg/l ; Pb 50mg/l ; Se 50mg/l ; Sr 50mg/l ; Zn 50mg/l in HNO3 1% | 500 | ml | 12 | Yes |
| 109480.L1 | Calibration Standard Trace Metals (XIII) - 15 components; Al 500mg/l ; V 250mg/l ; As 100mg/l ; Be 100mg/l ; Co 100mg/l ; Cr 100mg/l ; Cu 100mg/l ; Fe 100mg/l ; Mn 100mg/l ; Ni 100mg/l ; Pb 100mg/l ; Zn 100mg/l ; Cd 25mg/l ; Se 25mg/l ; Hg 5mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| 109410.L1 | ICP/MS Multi element standard solution XXIII 15 components; 1ug/l each of B ; Ba ; Co ; Fe ; Ga ; In ; K ; Li ; Lu ; Na ; Rh ; Sc ; Tl ; U ; Y in HNO3 5% | 100 | ml | 6 | Yes |
| 109410.L5 | ICP/MS Multi element standard solution XXIII 15 components; 1ug/l each of B ; Ba ; Co ; Fe ; Ga ; In ; K ; Li ; Lu ; Na ; Rh ; Sc ; Tl ; U ; Y in HNO3 5% | 500 | ml | 6 | Yes |
| 109500.L1 | GF AAS Multi element standard XVIII - 16 components; Ag 10mg/l ; Al 100mg/l ; As 100mg/l ; Ba 50mg/l ; Be 5mg/l ; Cd 5mg/l ; Co 50mg/l ; Cr 20mg/l ; Cu 50mg/l ; Fe 20mg/l ; Mn 20mg/l ; Ni 50mg/l ; Pb 100mg/l ; Sb 100mg/l ; Se 100mg/l ; Tl 100mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 115474.L1 | ICP Calibration Standard (I) - 19 components; Ag 50mg/l ; Al 100mg/l ; B 15mg/l ; Ba 5mg/l ; Be 1mg/l ; Bi 200mg/l ; Cd 20mg/l ; Co 20mg/l ; Cr 25mg/l ; Cu 20mg/l ; Fe 15mg/l ; Ga 150mg/l ; In 200mg/l ; Mn 5mg/l ; Ni 50mg/l ; Pb 200mg/l ; Sr 1mg/l ; Tl 400mg/l ; Zn 20mg/l in HNO3 5% | 100 | ml | 12 | Yes |
| 109487.L1 | ICP Calibration Standard - Quality Control (XVI) 21 components; 100mg/l each of As ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Li ; Mg ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Sr ; Ti ; Tl ; V ; Zn in HNO3 2% | 100 | ml | 12 | Yes |
| 111355.L1 | ICP Calibration Standard (IV) 23 components; 1000mg/l each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 2% | 100 | ml | 12 | Yes |
| 111355.L5 | ICP Calibration Standard (IV) 23 components; 1000mg/l each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 2% | 500 | ml | 12 | Yes |
| 109493.L1 | Multi-element solution 23 components; As 50ug/l ; B 100ug/l ; Ba 50ug/l ; Be 20ug/l ; Bi 10ug/l ; Ca 35000ug/l ; Cd 20ug/l ; Co 25ug/l ; Cr 20ug/l ; Cu 20ug/l ; Fe 100ug/l ; K 3000ug/l ; Mg 15000ug/l ; Mn 30ug/l ; Mo 100ug/l ; Na 8000ug/l ; Ni 50ug/l ; Pb 25ug/l ; Se 10ug/l ; Sr 100ug/l ; Tl 10ug/l ; V 50ug/l ; Zn 50ug/l in HNO3 5% | 100 | ml | 12 | Yes |
| 109492.L1 | ICP multi-element standard solution VIII 24 components; 100mg/l each of Al ; B ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Se ; Sr ; Te ; Tl ; Zn in HNO3 2% | 100 | ml | 12 | Yes |
| 110714.L1 | Merck ICP multi-element standard V - 26 components; Al 20mg/l ; As 20mg/l ; B 2mg/l ; Ba 2mg/l ; Be 1mg/l ; Ca 10mg/l ; Cd 2mg/l ; Cr 2mg/l ; Cu 2mg/l ; Fe 2mg/l ; Hg 5mg/l ; K 100mg/l ; Li 2mg/l ; Mg 1mg/l ; Mn 1mg/l ; Na 20mg/l ; Ni 5mg/l ; P 10mg/l ; Pb 20mg/l ; Sc 1mg/l ; Se 20mg/l ; Sr 1mg/l ; Te 20mg/l ; Ti 2mg/l ; Y 1mg/l ; Zn 2mg/l in HCl 5% | 100 | ml | 12 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 109498.L1 | ICP-MS Calibration Standard (XXI) - 29 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cs ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Rb ; Se ; Sr ; Tl ; U ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| N9300233 | ICP-MS Calibration Standard (XXI) - 29 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cs ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Rb ; Se ; Sr ; Tl ; U ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| N9300233.L5 | ICP-MS Calibration Standard (XXI) - 29 components; 10mg/l each of Ag ; Al ; As ; Ba ; Be ; Bi ; Ca ; Cd ; Co ; Cr ; Cs ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Rb ; Se ; Sr ; Tl ; U ; V ; Zn in HNO3 5% | 500 | ml | 12 | Yes |
| 110580.L1 | ICP multi-element standard solution VI 30 components; Ag 10mg/l ; Al 10mg/l ; As 100mg/l ; B 100mg/l ; Ba 10mg/l ; Be 100mg/l ; Bi 10mg/l ; Ca 1000mg/l ; Cd 10mg/l ; Co 10mg/l ; Cr 10mg/l ; Cu 10mg/l ; Fe 100mg/l ; Ga 10mg/l ; K 10mg/l ; Li 10mg/l ; Mg 10mg/l ; Mn 10mg/l ; Mo 10mg/l ; Na 10mg/l ; Ni 10mg/l ; Pb 10mg/l ; Rb 10mg/l ; Se 100mg/l ; Sr 10mg/l ; Te 10mg/l ; Tl 10mg/l ; U 10mg/l ; V 10mg/l ; Zn 100mg/l in HNO3 5% | 100 | ml | 6 | Yes |

# Standards Equivalent to Jobin Yvon

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| JYICP-QC2.L1 | Standard Quality Control for Chlorine - Chlorides (Cl-) 10 000mg/l in Water | 100 | ml | 12 | Yes |
| JYICP-QC2.L5 | Standard Quality Control for Chlorine - Chlorides (Cl-) 10 000mg/l in Water | 500 | ml | 12 | Yes |
| JYICP-MIXMAJ.L1 | Standard for determination of 4 main elements - 5000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 100 | ml | 12 | Yes |
| JYICP-MIXMAJ.L5 | Standard for determination of 4 main elements - 5000mg/l each of Ca ; K ; Mg ; Na in HNO3 5% | 500 | ml | 12 | Yes |
| JYICP-MIXHM.L1 | Standard for the Determination of traces of 5 heavy metals - As 100mg/l ; Tl 100mg/l ; Cd 50mg/l ; Se 50mg/l ; Pb 30mg/l in HNO3 5% | 100 | ml | 6 | Yes |
| JYICP-QCACT.L1 | Standard Quality Control for Testing ICP Activa Family - 5 components; 100mg/l each of Al ; Cd ; K ; Mg ; Pb in HNO3 5% | 100 | ml | 12 | Yes |
| CE3B.K5.5N.L1 | Standard Solution 5 components; K 1500ug/ml ; Pb 1000ug/ml ; Al 500ug/ml ; Mg 500ug/ml ; Cd 100ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| JYICP-QC1.L1 | Standard Solution 5 components; K 1500ug/ml ; Pb 1000ug/ml ; Al 500ug/ml ; Mg 500ug/ml ; Cd 100ug/ml in HNO3 5% | 100 | ml | 12 | Yes |
| JYICP-QC1.L5 | Standard Solution 5 components; K 1500ug/ml ; Pb 1000ug/ml ; Al 500ug/ml ; Mg 500ug/ml ; Cd 100ug/ml in HNO3 5% | 500 | ml | 12 | Yes |
| JYICP-MIX7.L1 | Standard for Semi-quantitative Method - 7 components; K 1000mg/l ; Ag 100mg/l ; Al 100mg/l ; B 100mg/l ; Ba 100mg/l ; Na 100mg/l ; Si 50mg/l in HNO3 5%/tr HF | 100 | ml | 12 | Yes |
| JYICP-MIX7HSI.L1 | Quality Control Standard - 7 components; K 1000mg/l ; Ag 50mg/l ; Al 100mg/l ; B 100mg/l ; Ba 100mg/l ; Na 100mg/l ; Si 500mg/l in HNO3 5%/ tr HF | 100 | ml | 12 | Yes |
| JYICP-MIX21.L1 | Standard for Semi-quantitative Method - 21 components; 100mg/l each of As ; Be ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Li ; Mg ; Mn ; Mo ; Ni ; Pb ; Sb ; Se ; Sr ; Ti ; Tl ; V ; Zn in HNO3 5% | 100 | ml | 12 | Yes |
| JYICP-MIX23.L1 | Quality Control - 23 components; 1000ug/ml each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 10% | 100 | ml | 12 | Yes |
| JYICP-MIX23.L5 | Quality Control - 23 components; 1000ug/ml each of Ag ; Al ; B ; Ba ; Bi ; Ca ; Cd ; Co ; Cr ; Cu ; Fe ; Ga ; In ; K ; Li ; Mg ; Mn ; Na ; Ni ; Pb ; Sr ; Tl ; Zn in HNO3 10% | 500 | ml | 12 | Yes |

# Standards equivalent to NIST

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| 1641e.L1 | Mercury 0.1016mg/kg in HNO3 3% (w/w) ; HCl 2% (w/w) | 100 | ml | 6 | Yes |
| 1641d.L1 | Mercury In Water Hg 1.557mg/kg in HNO3 2% (stabilized with 1 mg/kg Gold) | 100 | ml | 6 | Yes |
| 1643.L1 | Trace Metals in Water 30 components; Ag 1ug/l ; Al 142ug/l ; As 60ug/l ; B 158ug/l ; Ba 544ug/l ; Be 14ug/l ; Bi 14ug/l ; Ca 32000ug/l ; Cd 7ug/l ; Co 27ug/l ; Cr 20ug/l ; Cu 23ug/l ; Fe 98ug/l ; K 2000ug/l ; Li 17ug/l ; Mg 8000ug/l ; Mn 39ug/l ; Mo 121ug/l ; Na 21000ug/l ; Ni 62ug/l ; Pb 20ug/l ; Rb 14ug/l ; Re 113ug/l ; Sb 58ug/l ; Se 12ug/l ; Sr 323ug/l ; Te 1ug/l ; Tl 7ug/l ; V 38ug/l ; Zn 79ug/l in HNO3 5% | 100 | ml | 12 | Yes |

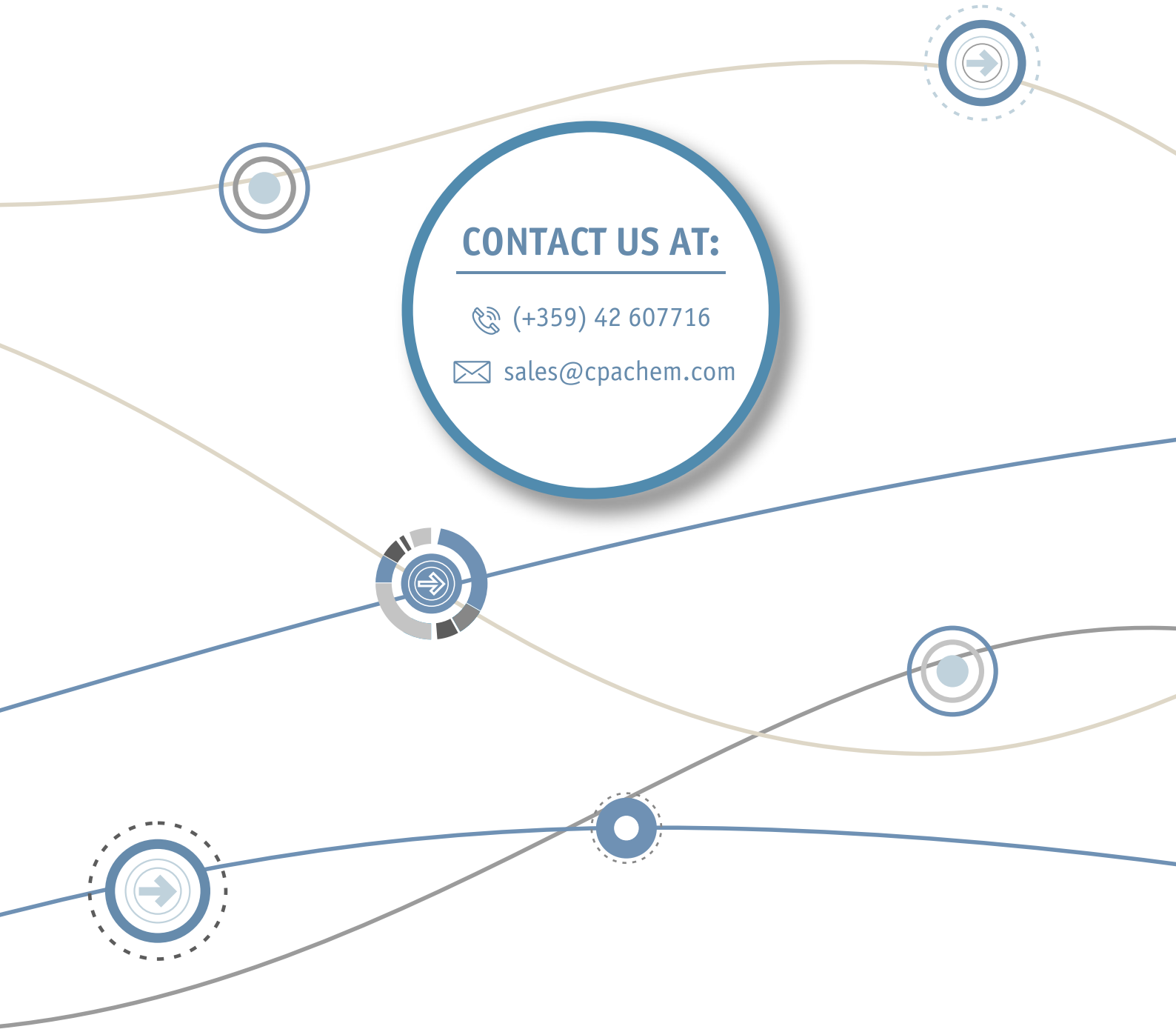
# Standards Equivalent to Metrohm

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| REAIC105002.L5 | Metrohm Peak - chloride/sulfate standard - 2 components; 1mg/l each of Chlorides (Cl-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| REAIC105006.L5 | Metrohm Peak - chloride/sulfate standard - 2 components; 10mg/l each of Chlorides (Cl-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| REAIC105004.L5 | Metrohm Peak - chloride/sulfate standard - 2 components; 2.5mg/l each of Chlorides (Cl-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| REAIC105005.L5 | Metrohm Peak - chloride/sulfate standard - 2 components; 5mg/l each of Chlorides (Cl-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| REAIC105001.L5 | Metrohm Peak - chloride/sulfate standard - 2 components; 0.5mg/l each of Chlorides (Cl-) ; Sulphates (SO42-) in Water | 500 | ml | 6 | Yes |
| REAIC1220.L1 | Mixed Cations Standard - 6 components; Lithium (Li+) 1mg/l ; Sodium (Na+) 5mg/l ; Ammonium (NH4+) 5mg/l ; Potassium (K+) 10mg/l ; Calcium (Ca2+) 10mg/l ; Magnesium (Mg2+) 10mg/l in Water | 100 | ml | 6 | Yes |
| REAIC1230.L1 | Mixed Cations Standard - 6 components; 100mg/l each of Lithium (Li+) ; Sodium (Na+) ; Ammonium (NH4+) ; Potassium (K+) ; Calcium (Ca2+) ; Magnesium (Mg2+) in Water | 100 | ml | 12 | Yes |
| REAIC1026.L1 | Mixed Anions Standard - 7 components; Fluorides (F-) 0.5mg/l ; Phosphates (PO43-) 0.5mg/l ; Nitrites (NO2-) 1mg/l ; Nitrates (NO3-) 1mg/l ; Bromides (Br-) 1mg/l ; Chlorides (Cl-) 12.5mg/l ; Sulphates (SO42-) 12.5mg/l in Water | 100 | ml | 6 | Yes |
| REAIC1040.L1 | Mixed Anions Standard - 7 components; 0.1mg/l each of Fluorides (F-) ; Phosphates (PO43-) ; Nitrites (NO2-) ; Nitrates (NO3-) ; Bromides (Br-) ; Chlorides (Cl-) ; Sulphates (SO42-) in Water | 100 | ml | 6 | Yes |

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| REAIC1020.L1 | Mixed Anions Standard - 7 components; Fluorides (F-) 2ppm ; Phosphates (PO43-) 10ppm ; Nitrites (NO2-) 5ppm ; Nitrates (NO3-) 10ppm ; Bromides (Br-) 10ppm ; Chlorides (Cl-) 5ppm ; Sulphates (SO42-) 10ppm in Water | 100 | ml | 6 | Yes |
| REAIC1035.L1 | Mixed Anions Standard - 7 components; 100mg/l each of Chlorides (Cl-) ; Fluorides (F-) ; Sulphates (SO42-) ; Nitrates (NO3-) ; Nitrites (NO2-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 100 | ml | 12 | Yes |
| 1521.K1.W.L1 | Mixed Anions Standard - 7 components; 100mg/l each of Chlorides (Cl-) ; Fluorides (F-) ; Sulphates (SO42-) ; Nitrates (NO3-) ; Nitrites (NO2-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 100 | ml | 12 | Yes |
| 1521.K1.W.L25 | Mixed Anions Standard - 7 components; 100mg/l each of Chlorides (Cl-) ; Fluorides (F-) ; Sulphates (SO42-) ; Nitrates (NO3-) ; Nitrites (NO2-) ; Bromides (Br-) ; Phosphates (PO43-) in Water | 250 | ml | 12 | Yes |

## Standards Equivalent to Dionex

| Ref. Number | Description | Volume | Msr. Unit | Shelf-life (months) | ISO 17034 ISO 17025 |
|---|---|---|---|---|---|
| P/N037157.L1 | Combined Five Anion Standard - 5 components; Fluorides (F-) 20mg/l ; Chlorides (Cl-) 30mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 150mg/l ; Sulphates (SO42-) 150mg/l in Water | 100 | ml | 6 | Yes |
| P/N040187.L05 | Combined Six Cation Standard-I - 6 components; Lithium (Li+) 50mg/l ; Sodium (Na+) 200mg/l ; Ammonium (NH4+) 400mg/l ; Potassium (K+) 200mg/l ; Calcium (Ca2+) 1000mg/l ; Magnesium (Mg2+) 200mg/l in Water | 50 | ml | 6 | Yes |
| P/N040187.L1 | Combined Six Cation Standard-I - 6 components; Lithium (Li+) 50mg/l ; Sodium (Na+) 200mg/l ; Ammonium (NH4+) 400mg/l ; Potassium (K+) 200mg/l ; Calcium (Ca2+) 1000mg/l ; Magnesium (Mg2+) 200mg/l in Water | 100 | ml | 6 | Yes |
| P/N046070.L05 | Combined Six Cation Standard-II - 6 components; Lithium (Li+) 50mg/l ; Sodium (Na+) 200mg/l ; Ammonium (NH4+) 250mg/l ; Potassium (K+) 500mg/l ; Calcium (Ca2+) 500mg/l ; Magnesium (Mg2+) 250mg/l in Water | 50 | ml | 6 | Yes |
| P/N046070.L1 | Combined Six Cation Standard-II - 6 components; Lithium (Li+) 50mg/l ; Sodium (Na+) 200mg/l ; Ammonium (NH4+) 250mg/l ; Potassium (K+) 500mg/l ; Calcium (Ca2+) 500mg/l ; Magnesium (Mg2+) 250mg/l in Water | 100 | ml | 6 | Yes |
| P/N057590.L1 | Combined Seven Anion Standard II - 7 components; Fluorides (F-) 20mg/l ; Chlorides (Cl-) 100mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 200mg/l ; Sulphates (SO42-) 100mg/l in Water | 100 | ml | 6 | Yes |
| P/N056933.L05 | Combined Seven Anion Standard I - 7 components; Fluorides (F-) 20mg/l ; Chlorides (Cl-) 30mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 150mg/l ; Sulphates (SO42-) 150mg/l in Water | 50 | ml | 6 | Yes |
| P/N056933.L1 | Combined Seven Anion Standard I - 7 components; Fluorides (F-) 20mg/l ; Chlorides (Cl-) 30mg/l ; Nitrites (NO2-) 100mg/l ; Bromides (Br-) 100mg/l ; Nitrates (NO3-) 100mg/l ; Phosphates (PO43-) 150mg/l ; Sulphates (SO42-) 150mg/l in Water | 100 | ml | 6 | Yes |



## CONTACT US AT:

(+359) 42 607716

sales@cpachem.com

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