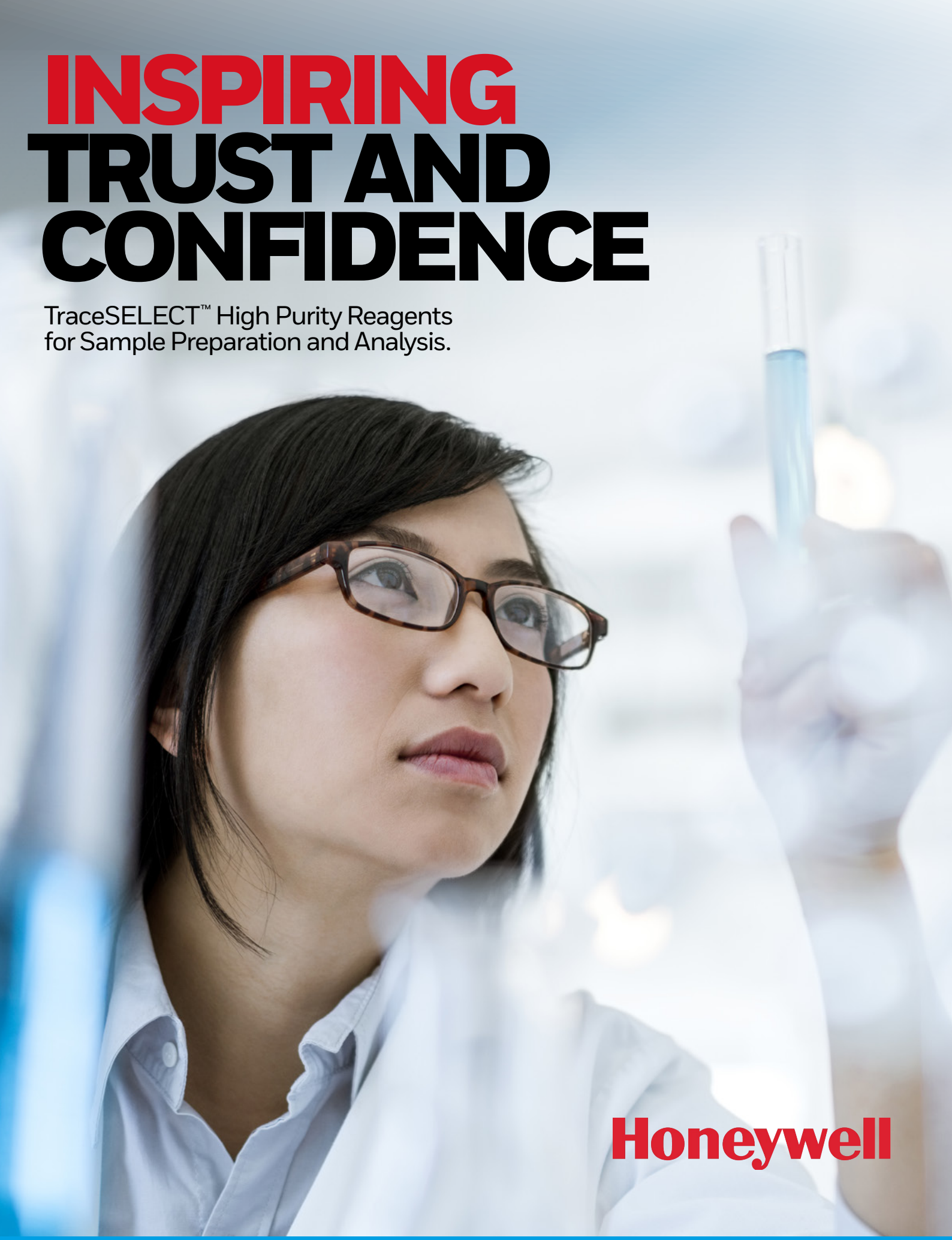
INSPIRING TRUST AND CONFIDENCE

TraceSELECT™ High Purity Reagents
for Sample Preparation and Analysis.



Honeywell

United Kingdom:
slsinfo@scientific-labs.com

International:
slsexport@scientific-labs.com

Northern Ireland:
NI.sales@scientific-labs.com

Republic of Ireland:
ROI.sales@scientific-labs.com

SCIENTIFIC LABORATORY SUPPLIES

Analysis you can trust

With Honeywell's analytical reagents, superior quality and safety standards are a prime focus. We use a comprehensive Quality Assurance System in line with EN 29001 (ISO 9001) and each of our products is manufactured to clear, guaranteed specifications. We employ a large variety of modern analytical methods, such as inductively coupled plasma optical emission spectroscopy (ICP-OES), inductively coupled plasma mass spectrometry (ICP-MS) , flame atomic absorption spectroscopy (AAS) and graphite furnace AAS (GF-AAS). This allows for specifically tailored control and analysis procedures for each product.

Atomic Emission Spectroscopy Analysis

Reagents for Inorganic Trace Analysis

Sensitive trace analysis applications require extremely pure sample preparation reagents. These digestive reagents cannot contain metal ions or other impurities. In addition, complete decomposition of the sample is required to achieve reproducible and accurate elemental results by instrumental analytical methods.

Sample wet digestion/dissolution is a method that breaks down the components of a matrix into simple chemical forms. This digestion can occur in three ways:

- With the introduction of energy such as heat
- By using a chemical reagent such as an acid
- By a combination of these two methods

Most analytical measurements using highly sensitive methods (AAS, ICP-AOES, ICP-MS, stripping voltammetry, ion chromatography, etc.) are performed on samples in solution. One of the most effective and economical sample preparation methods is microwave digestion.

In most cases, achieving homogeneity and mineralization of the sample is sufficient. UV photolysis using hydrogen peroxide and either potassium persulfate or nitric acid is very often the method of choice for the decomposition of organic impurities in aqueous solutions.

The most commonly used reagents for wet decomposition are mineral and oxidizing acids. Wet decomposition has the advantage of being effective on both inorganic and organic materials. It often destroys or removes the sample matrix, thus helping to reduce or eliminate some types of interference.

Table 1 provides an annotated overview of the acids and bases used for wet digestion.

Sources

1. Feng, X.; Wu, S.; Wharmby, A.; Wittmeier, A. Microwave digestion of plant and grain standard reference materials in nitric and hydrofluoric acids for multi-elemental determination by inductively coupled plasma mass spectrometry. J. Anal. At. Spectrom. 1999, 14, 939–946.
2. Golimowski J.; Golimowska, K. UV photooxidation as pretreatment step in inorganic analysis of environmental samples. Anal. Chim. Acta. 1996, 325, 111–133.
3. Vandecasteele, C.; Block, C. B. Modern Methods for Trace Element Determination; Wiley: Chichester, UK, 1997; pp 1–8.
4. Sampling and Sample Preparation; Stoeppler, M., Ed; Springer: Berlin, 1997.
5. Sah, R. N.; Miller, R. O. Spontaneous reaction for acid dissolution of biological tissues in closed vessels. Anal. Chem. 1992, 64, 230.
6. Inductively coupled plasmas in analytical atomic spectrometry; Montaser, A.; Golightly, D. W., Eds.; VCH: New York, 1992; pp 473–516.
7. Tracy, M. L.; Moeller, G. Continuous flow vapor generation for inductively coupled argon plasma spectrometric analysis; Part 1: Selenium. J. Assoc. Off. Anal. Chem. 1990, 73, 404–410.
8. Pacquette, H. L.; Elwood, S. A.; Ezer, M.; Simeonsson, J. B. A comparison of continuous flow hydride generation laser-induced fluorescence and laser enhanced ionization spectrometry approaches for parts per trillion level measurements of arsenic, selenium and antimony. J. Anal. At. Spectrom. 2001, 16, 152–158.
9. Sun, Y. C.; et al. Combining electrothermal vaporization inductively coupled plasma mass spectrometry with in situ TMAH thermochemolysis for the direct determination of trace impurities in a polymer-based photoresist. J. Anal. At. Spectrom. 2006, 21, 311–316.
10. Jeitziner, M. High-purity TMAH for alkaline digestion of biological samples. Analytix 2008, 1, 17.
11. Jeitziner, M. High-Purity Reagents for AAS. Analytix 2011, 1, 14.

Table 1

Digestion/Dissolution Acids and Bases

HNO_3	Nitric acid is the most frequently utilized sample dissolution medium. It oxidizes metals not dissolved by HCl and other non-oxidizing acids. Au, Pt metals (except Pd), Nb, Ta, and Zr are not dissolved. Al and Cr are passivated. Sn, Sb, and W give insoluble hydrous oxides. Dissolves most sulfides (except HgS). Unfortunately, the carbon contained in organic materials is only partly converted to CO_2 by HNO_3 at temperatures up to 200 °C. Nitric acid should never be used for the digestion of highly aromatic compounds because of the potential for the formation of highly explosive compounds. In the case of alcohols, the samples should be pretreated with sulfuric acid.
HCl	Hydrochloric acid is used for many salts of weak acids, e.g., carbonates, phosphates, some oxides, and some sulfides.
H_2SO_4	Sulfuric acid is used when its high boiling point (300 °C) is an advantage, as in expelling a volatile product or increasing the reaction rate. It provides dehydrating and oxidizing properties at high temperatures.
$HClO_4$	Perchloric acid is a very powerful oxidizing agent at fuming temperatures (boiling point 203 °C). It is usually mixed with HNO_3 to oxidize easily attacked organic matter that might otherwise react violently with $HClO_4$. H_2SO_4 (dehydrating agent) increases oxidizing power. Good solvent for stainless steel and for sulfides.
HF	Hydrofluoric acid is used for digestion of silacaceous samples and as an auxiliary reagent to HNO_3 or $HClO_4$ to eliminate fluoride. With HNO_3, HF dissolves Ti, W, Nb, and Zr (and their carbides, nitrides, and borides) as a result of formation of complex fluorides. Certain refractory silicates and other minerals are not decomposed; these must be dissolved by fusion.
H_2O_2	Hydrogen peroxide is a very popular oxidizing reagent as it is converted to water and oxygen during the oxidation of biological material. Additional advantages are that there is no acid corrosion of the digestion vessel PTFE walls, no formation of insoluble salts with an acid anion, and no change of the sample matrix by an acid. Because of its strong oxidation power, only small amounts of H_2O_2 need be used so concentrated sample solutions can be obtained.
AcOH	Acetic acid is most often used for the extraction of metallic impurities together with sodium acetate.
HBr	Hydrobromic acid is a non-oxidizing acid. It is used in some special applications because it yields better reductive selectivity in the determination of Se(VI) by Hydride Generation-Laser Induced Fluorescence (HG-LIF) than HCl.
H_3PO_4	Phosphoric acid is commonly used in the semiconductor industry to both clean and etch metal surfaces. The concentration of the phosphoric acid is critical to optimizing these processes.
H_2O	Water ensures the highest accuracy in trace analysis of ppt range by minimizing blank values.
TMAH	Tetramethylammonium hydroxide [$(CH_3)_4NOH$] is an efficient strong alkali used for solubilizing soft tissues and food stuffs. Compared to conventional alkaline sample digestion procedures using NaOH or KOH, using TMAH enables more accurate analysis due to its lower matrix effect. A diluted 0.3 M TMAH solution is also used during the lithographic process in the semiconductor industry.
NaOH	Sodium hydroxide is frequently used for melting digestions at 500 °C. It attacks platinum and porcelain. Residue is dissolved with 1.2 M hydrochloric acid.
KOH	Potassium hydroxide is frequently used for melting digestions at 500 °C. It attacks platinum and porcelain. Residue is dissolved with 1.2 M hydrochloric acid.
K_2CO_3	Potassium carbonate is the classic reagent for melting digestions at 800 °C. Residue is dissolved with hydrochloric acid.

Sample Preparation for Trace Analysis

TraceSELECT™ Ultra and TraceSELECT

Ultra-pure acids, bases, and salts for smelting and wet digestion in environmental, water, and food analysis.

Sample preparation for trace analysis requires reagents of the highest purity. Our TraceSELECT Ultra products for ultra-trace analysis at ppb and even ppt levels are produced by sub-boiling distillation.

Sub-boiling is recognized as the best way to obtain high purity acids with the lowest blank values for ultra-trace analysis. The technique is based on the evaporation of liquid by infrared heating at the surface. It avoids violent boiling and the formation of liquid aerosols that can be transported with the distillate.

To maintain their high purity, TraceSELECT Ultra products are supplied in PTFE PFA (fluoropolymer) bottles. Water and ortho-phosphoric acid are supplied in especially pre-leached HDPE bottles. Recent process improvements have allowed us to reduce our impurity specifications to guarantee the lowest levels of trace impurities in our TraceSELECT Ultra products.

The acids, bases, and salts in the TraceSELECT series have been developed for sample preparation and analysis in the ppb (µg/kg) trace range. Purity and composition are guaranteed with our careful preparation, testing, and verification of the final product for metal content and ionic trace impurities using ICP-OES, ICP-MS and ion chromatography.

To further guarantee purity and stability, TraceSELECT products are packaged in high-quality containers appropriate for each product.

The Honeywell Quality Management System guarantees consistent quality and safety for all TraceSELECT Ultra and TraceSELECT products. The reagents are produced and bottled under clean-room conditions.

Honeywell Fluka -
Nitric Acid TraceSELECT
84385-2.5L

Trace Analysis: High Purity Reagents

Matrix Modifiers

In graphite furnace AAS, element determinations are increasingly being carried out with matrix modifiers. Chemical modification should be considered if an analyte is highly volatile, or if the analyte and matrix volatilize at similar temperatures.

Such modification would allow ashing at higher (or atomization at lower) furnace temperatures, resulting in elimination of the matrix with no loss of the analyte (or atomization of the analyte, but not the matrix).

Depending on the element to be determined, various substances are used. A primary criterion for such substances is the absence of the element to be analyzed. For this reason, the following recommended reagents have been specially tested for their suitability as matrix modifiers.

Spectroscopic Buffers for Flame AAS

In flame AAS, spectroscopic buffers are often used to suppress physical, ionization, and chemical interferences.

Reducing Agents for Hydride AAS

Hydride AAS is used for the analysis (especially traces) of arsenic, antimony, tin, selenium, bismuth, and mercury. It is used to separate and preconcentrate analytes from sample matrices by a reaction that turns them into their hydride vapors. Sodium borohydride is the common reagent of choice for the reduction.

Fluka reagents are specifically analyzed to ensure the absence of hydride generating metals.

Solvents for Trace Metal Speciation Analysis

TraceSELECT™ solvents for LC-ICP-MS applications

Honeywell has developed high purity TraceSELECT solvents for speciation analysis by LC-ICP-MS. TraceSELECT solvents undergo rigorous purification procedures. This is followed by UV spectroscopy, IC, and ICP-MS testing to assure high chemical purity and high UV transmittance.

The blank values for metal traces in these solvents are in the ppb range or lower.

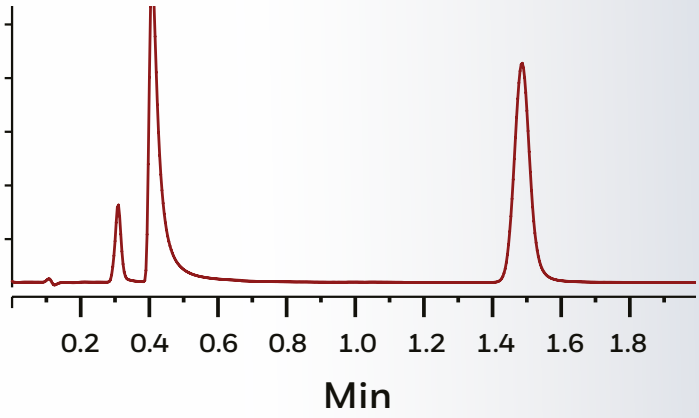
The toxicity of trace metals in food, clinical chemistry, biology, and environmental sciences is an area of increasing interest. In the environment, many diverse species of an element can be present. In addition, different species of the same element can possess very different degrees of toxicity.

Monitoring elemental species requires an analytical method that is sensitive and specific enough to resolve and quantify the individual species at ultra-trace levels. An individual toxic species may constitute only a fraction of an element's total concentration in a sample.

The coupling of the two well established analytical techniques, HPLC and inductively coupled plasma-mass spectrometry (ICP-MS), is straightforward. This is primarily because the flow rates commonly used with LC are compatible to conventional liquid sample introduction systems, such as those based on pneumatic nebulization.

Thus, the outlet of the LC column is directly connected to the ICP-MS nebulizer. This technique is especially useful in carrying out automated high-throughput speciation analysis. International trends show speciation of metals as an area of very high research interest. In the future, speciation of biological samples will undoubtedly involve determinations of which organic molecules attract which metals in specific sample types.

ICP-MS is a superior detection technique for trace elements in general, but especially for elements of interest, such as arsenic, selenium, cadmium, iodine, and others in chromatographic eluents.



The chromatogram of three mercury species
Hg^{2+}, $MeHg^{+}$, $EtHg^{+}$ obtained by HPLC-ICP-MS

Calibration Inorganic Certified Reference Materials for IC, AAS, and ICP-OES/MS Applications

Advance Your Analysis

Honeywell offers a full range high quality Certified Reference Materials (CRM) for inorganic trace analysis.

- Inductively Coupled Plasma Spectroscopy (ICP-OES and ICP-MS)
- Atomic Absorption Spectroscopy (AAS)
- Ion Chromatography (IC)

To obtain the most accurate and reliable results we recommend to combine the inorganic CRMs with our TraceSelect™ acids, bases and salts with key metal concentrations less than 1ppb and TraceSelectUltra™ acids and bases for ultra-trace analysis in the ppt level or below. Find more information at lab.honeywell.com/traceselect.

Extensive Portfolio to Provide the Highest Level of Confidence

A certified reference material (CRM) should be used on a regular basis to check the quality of products, to validate analytical measurement methods, or for the calibration of instruments. A fully ISO Guide 31-compliant Certificate of Analysis (CoA) is issued for each lot. We offer free expert technical support – ensuring you have the information you need to quickly start your analysis, and pass relevant audits.

- Wide range of over 600 single element standards in different concentrations and matrices
- Inorganic Multi-Element Standards for instrument and method-specific applications
- Certified Reference Materials – Tested under ISO/IEC 17025 and produced according to ISO 17034

Benefits of Fluka™ Certified Reference Materials

- Traceability – Fully traceable to international standards, i.e. NIST traceability for ICP and AAS standards
- Tailor-made standards can be manufactured upon request
- Extended shelf life – Inorganic CRMs are packed in light- and gas-tight aluminized bags
- Technical Support – Dedicated technical support to answer your standards and lab questions
- Documentation – A batch-specific Certificate of Analysis (CoA) is enclosed in each package

Definition of Speciation Analysis

The International Union of Pure and Applied Chemistry (IUPAC) defines speciation analysis as the “analytical activities of identifying and/or measuring the quantities of one or more individual chemical species in a sample.”

A chemical species is a “specific form of an element defined as to isotopic composition, electronic or oxidation state, and/or complex or molecular structure.”

In speciation analysis, the objective is usually to determine the identity and/or concentration of one or more chemical species in a sample, often of natural origin and therefore potentially containing many different species. Care must be taken to choose and execute the analysis to maximize sensitivity and specificity.

Performing a speciation analysis in a complex mixture involves separation, identification, and characterization of various forms of elements in the sample. The most commonly used strategy for speciation analysis is to perform a separation step before a generic detector.

Honeywell Riedel de Haën - 2-Propanol TraceSELECT
04516-1L

LC separation coupled with ICP-MS

The hyphenated technique HPLC-ICP-MS is a robust, sensitive element-selective method capable of giving a complete picture of the elemental species in a solution.

The elemental response is usually independent of species, so it is often possible to quantify a species even when its structure is unknown (assuming good HPLC recovery). Identification, however, is based solely on retention time matching. Therefore, a compound in the sample can be identified only by comparison with a standard.

Ultra Pure Reagents for Voltammetry

TraceSELECT reagents for ultra-trace analysis and metal speciation

Voltammetry is predominantly used for inorganic trace analysis of anions and cations, but can also be used for the determination of various organic compounds. The most important fields of application of inorganic determinations are in metallurgy, environmental analysis, food analysis, toxicology, and clinical analysis.

This technique is also a preferred method for the determination of certain metal speciations, such as Fe(II)/Fe(III) or Cr(III)/Cr(VI). When mercury is used as an electrode in a voltammetric cell, the technique is called polarography.

The reduction of metals into mercury is more favourable than reduction to the solid-state electrode. Further on there is always a clean new Hg electrode surface available for each measurement.

Honeywell Fluka - Nitric Acid TraceSELECT
84385-2.5L

Multi-mode Electrode (MME)
Published with kind permission of Metrohm AG, Switzerland

Code	Brand	Description	Pack	Category
07692-500ML	Fluka	Acetic acid TraceSELECT™ Ultra, for ultratrace analysis, ≥99.0%	500mL	Acids for Trace Analysis
07692-250ML	Fluka	Acetic acid TraceSELECT™ Ultra, for ultratrace analysis, ≥99.0%	250mL	Acids for Trace Analysis
07692-1L	Fluka	Acetic acid TraceSELECT™ Ultra, for ultratrace analysis, ≥99.0%	1L	Acids for Trace Analysis
96208-500ML	Fluka	Hydrochloric acid TraceSELECT™ Ultra, for ultratrace analysis, 32-35%	500mL	Acids for Trace Analysis
96208-250ML	Fluka	Hydrochloric acid TraceSELECT™ Ultra, for ultratrace analysis, 32-35%	250mL	Acids for Trace Analysis
96208-1L	Fluka	Hydrochloric acid TraceSELECT™ Ultra, for ultratrace analysis, 32-35%	1L	Acids for Trace Analysis
02650-500ML	Fluka	Nitric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-69%	500mL	Acids for Trace Analysis
02650-2L	Fluka	Nitric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-69%	2L	Acids for Trace Analysis
02650-250ML	Fluka	Nitric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-69%	250mL	Acids for Trace Analysis
02650-1L	Fluka	Nitric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-69%	1L	Acids for Trace Analysis
12415-500ML	Fluka	Perchloric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-72%	500mL	Acids for Trace Analysis
12415-250ML	Fluka	Perchloric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-72%	250mL	Acids for Trace Analysis
12415-1L	Fluka	Perchloric acid TraceSELECT™ Ultra, for ultratrace analysis, 67-72%	1L	Acids for Trace Analysis
64957-1L	Fluka	Phosphoric acid TraceSELECT™ Ultra, for ultratrace analysis, ≥85%	1L	Acids for Trace Analysis
77239-500ML	Fluka	Sulfuric acid TraceSELECT™ Ultra, for ultratrace analysis, ≥95%	500mL	Acids for Trace Analysis
77239-250ML	Fluka	Sulfuric acid TraceSELECT™ Ultra, for ultratrace analysis, ≥95%	250mL	Acids for Trace Analysis
77239-1L	Fluka	Sulfuric acid TraceSELECT™ Ultra, for ultratrace analysis, ≥95%	1L	Acids for Trace Analysis
45727-500ML	Fluka	Acetic acid TraceSELECT™, for trace analysis, ≥99.0%	500mL	Acids for Trace Analysis
45727-2.5L	Fluka	Acetic acid TraceSELECT™, for trace analysis, ≥99.0%	2.5L	Acids for Trace Analysis
45727-1L	Fluka	Acetic acid TraceSELECT™, for trace analysis, ≥99.0%	1L	Acids for Trace Analysis
45727-100ML	Fluka	Acetic acid TraceSELECT™, for trace analysis, ≥99.0%	100mL	Acids for Trace Analysis
09857-500ML	Fluka	Ammonium hydroxide solution TraceSELECT™, for trace analysis, ≥25% in H2O	500mL	Bases For Trace Analysis
09857-100ML	Fluka	Ammonium hydroxide solution TraceSELECT™, for trace analysis, ≥25% in H2O	100mL	Bases For Trace Analysis
06454-250ML	Fluka	Formic acid TraceSELECT™, for trace analysis, ≥88.0%	250mL	Acids for Trace Analysis
08256-500ML	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, ≥30%	500mL	Acids for Trace Analysis
08256-2.5L	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, ≥30%	2.5L	Acids for Trace Analysis
08256-1L	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, ≥30%	1L	Acids for Trace Analysis
08256-100ML	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, ≥30%	100mL	Acids for Trace Analysis
84415-500ML	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, fuming, ≥37%	500mL	Acids for Trace Analysis
84415-100ML	Fluka	Hydrochloric acid TraceSELECT™, for trace analysis, fuming, ≥37%	100mL	Acids for Trace Analysis
47559-500ML	Fluka	Hydrofluoric acid TraceSELECT™, for trace analysis, 47-51%	500mL	Acids for Trace Analysis
84385-6X500ML	Fluka	Nitric acid TraceSELECT™, for trace analysis, ≥69.0%	6 x 500mL	Acids for Trace Analysis
84385-5L	Fluka	Nitric acid TraceSELECT™, for trace analysis, ≥69.0%	5L	Acids for Trace Analysis
84385-500ML	Fluka	Nitric acid TraceSELECT™, for trace analysis, ≥69.0%	500mL	Acids for Trace Analysis
84385-2.5L	Fluka	Nitric acid TraceSELECT™, for trace analysis, ≥69.0%	2.5L	Acids for Trace Analysis
84385-1L	Fluka	Nitric acid TraceSELECT™, for trace analysis, ≥69.0%	1L	Acids for Trace Analysis
77227-500ML	Fluka	Perchloric acid TraceSELECT™, for trace analysis, 65-71%	500mL	Acids for Trace Analysis
77227-1L	Fluka	Perchloric acid TraceSELECT™, for trace analysis, 65-71%	1L	Acids for Trace Analysis
77227-100ML	Fluka	Perchloric acid TraceSELECT™, for trace analysis, 65-71%	100mL	Acids for Trace Analysis
79614-500ML	Fluka	Phosphoric acid TraceSELECT™, for trace analysis, ~85%	500mL	Acids for Trace Analysis
79614-100ML	Fluka	Phosphoric acid TraceSELECT™, for trace analysis, ~85%	100mL	Acids for Trace Analysis
84716-500ML	Fluka	Sulfuric acid TraceSELECT™, for trace analysis, ≥93%	500mL	Acids for Trace Analysis
84716-2.5L	Fluka	Sulfuric acid TraceSELECT™, for trace analysis, ≥93%	2.5L	Acids for Trace Analysis
84716-1L	Fluka	Sulfuric acid TraceSELECT™, for trace analysis, ≥93%	1L	Acids for Trace Analysis
95305-500ML	Riedel-de Haën	Water TraceSELECT™, for trace analysis	500mL	Trace Analysis Solvents
95305-4X2.5L	Riedel-de Haën	Water TraceSELECT™, for trace analysis	4 x 2.5L	Trace Analysis Solvents
95305-250ML	Riedel-de Haën	Water TraceSELECT™, for trace analysis	250mL	Trace Analysis Solvents
95305-2.5L	Riedel-de Haën	Water TraceSELECT™, for trace analysis	2.5L	Trace Analysis Solvents
95305-1L	Riedel-de Haën	Water TraceSELECT™, for trace analysis	1L	Trace Analysis Solvents
95305-10L	Riedel-de Haën	Water TraceSELECT™, for trace analysis	10L	Trace Analysis Solvents

Code	Brand	Description	Pack	Category
09725-25G	Fluka	Ammonium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	25g	Trace Analysis Salts
09725-100G	Fluka	Ammonium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	100g	Trace Analysis Salts
09979-100G	Fluka	Ammonium sulfate TraceSELECT™, for trace analysis, ≥99.9999% (metals basis)	100g	Trace Analysis Salts
90033-25G	Fluka	Cesium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	25g	Trace Analysis Salts
90033-100G	Fluka	Cesium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	100g	Trace Analysis Salts
16722-25G	Fluka	Cesium iodide TraceSELECT™, ≥99.9995%	25g	Trace Analysis Salts
05257-25G	Fluka	Potassium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	25g	Trace Analysis Salts
05257-100G	Fluka	Potassium chloride TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	100g	Trace Analysis Salts
60216-25G	Fluka	Potassium phosphate monobasic TraceSELECT™, for trace analysis, ≥99.995% (metals basis)	25g	Trace Analysis Salts
60216-100G	Fluka	Potassium phosphate monobasic TraceSELECT™, for trace analysis, ≥99.995% (metals basis)	100g	Trace Analysis Salts
60371-25G	Fluka	Potassium hydroxide hydrate TraceSELECT™, for trace analysis, ≥99.995% (metals basis)	25g	Trace Analysis Salts
59929-25G	Fluka	Sodium acetate TraceSELECT™, for trace analysis, ≥99.999% (metals basis), anhydrous	25g	Trace Analysis Salts
59929-100G	Fluka	Sodium acetate TraceSELECT™, for trace analysis, ≥99.999% (metals basis), anhydrous	100g	Trace Analysis Salts
71347-25G	Fluka	Sodium carbonate TraceSELECT™, for trace analysis, anhydrous, ≥99.999% (metals basis)	25g	Trace Analysis Salts
71347-100G	Fluka	Sodium carbonate TraceSELECT™, for trace analysis, anhydrous, ≥99.999% (metals basis)	100g	Trace Analysis Salts
38979-500G	Fluka	Sodium chloride TraceSELECT™, for trace analysis, ≥99.999% (metals basis)	500g	Trace Analysis Salts
38979-25G	Fluka	Sodium chloride TraceSELECT™, for trace analysis, ≥99.999% (metals basis)	25g	Trace Analysis Salts
38979-100G	Fluka	Sodium chloride TraceSELECT™, for trace analysis, ≥99.999% (metals basis)	100g	Trace Analysis Salts
01968-25G	Fluka	Sodium hydroxide monohydrate TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	25g	Trace Analysis Salts
01968-100G	Fluka	Sodium hydroxide monohydrate TraceSELECT™, for trace analysis, ≥99.9995% (metals basis)	100g	Trace Analysis Salts
71629-100G	Fluka	Sodium phosphate dibasic TraceSELECT™, for trace analysis, anhydrous, ≥99.999% (metals basis)	100g	Trace Analysis Salts
71492-25G	Fluka	Sodium phosphate monobasic TraceSELECT™, for trace analysis, anhydrous, ≥99.999% (metals basis)	25g	Trace Analysis Salts
71492-100G	Fluka	Sodium phosphate monobasic TraceSELECT™, for trace analysis, anhydrous, ≥99.999% (metals basis)	100g	Trace Analysis Salts
95164-250ML	Fluka	Cesium chloride Lanthanum chloride buffer TraceSELECT™, for flame atomic absorption spectrometry	250mL	Spectroscopy Reagents
428892-100ML	Fluka	Magnesium matrix modifier solution TraceSELECT™, 2% Mg in <5 wt. % HNO3, 99.9995%	100mL	Spectroscopy Reagents
71321-25G	Fluka	Sodium borohydride TraceSELECT™, for the determination of hydride formers by AAS, ≥99%	25g	Spectroscopy Reagents
71321-100G	Fluka	Sodium borohydride TraceSELECT™, for the determination of hydride formers by AAS, ≥99%	100g	Spectroscopy Reagents
01324-1L	Riedel-de Haën	Acetonitrile TraceSELECT™, for metal speciation analysis, ≥99.9%	1L	Trace Analysis Solvents
04516-1L	Riedel-de Haën	2-Propanol TraceSELECT™, for metal speciation analysis, ≥99.9% (GC)	1L	Trace Analysis Solvents
42105-1L	Riedel-de Haën	Methanol TraceSELECT™, for metal speciation analysis, ≥99.9%	1L	Trace Analysis Solvents
69508-1L	Riedel-de Haën	Acetone TraceSELECT™, for inorganic trace analysis, ≥99.9%	1L	Trace Analysis Solvents
72781-1L	Riedel-de Haën	N,N-Dimethylformamide TraceSELECT™, for inorganic trace analysis, ≥99.99995% (trace metals analysis)	1L	Trace Analysis Solvents
94068-100G	Fluka	Citric acid monohydrate TraceSELECT™, ≥99.9998% (metals basis)	100g	Acids for Trace Analysis
05878-100G	Fluka	L-Ascorbic acid TraceSELECT™, ≥99.9998% (metals basis)	100g	Acids for Trace Analysis
93722-100G	Fluka	Oxalic acid dihydrate TraceSELECT™, ≥99.9999% (metals basis)	100g	Acids for Trace Analysis

United Kingdom:
slsinfo@scientific-labs.com

International:
slsexport@scientific-labs.com

Northern Ireland:
NI.sales@scientific-labs.com

Republic of Ireland:
ROI.sales@scientific-labs.com

SCIENTIFIC LABORATORY SUPPLIES