

HIGH PURITY ACIDS



SCP SCIENCE offers two grades of high purity acids, **PlasmaPURE** and **PlasmaPURE Plus**. These acids are manufactured for use in all aspects of trace elemental analysis, including sample preparation, calibration and working standard preparation, and matrix blank preparation. Supplied with a detailed Certificate of Analysis listing over 60 elements, our acids are the way to avoid elemental contamination of your samples.

PlasmaPURE Plus Grade acids are manufactured with *extremely low* trace metal impurities; in most cases less than 0.01 ppb, and packaged in pre-leached Teflon bottles for ultra-low level analysis by ICP-OES or ICP-MS below 1 ppb.

PlasmaPURE Grade Acids are manufactured with trace metal impurities of less than 1 ppb and are intended for ICP-OES, GFAA and flame AA applications above 1 ppb.

Pre-prepared **Matrix Blanks** derived from **PlasmaPURE** trace metal grade acids and 18 megaohm water are also available. Ready-to-use and perfect for use when preparing calibration curves.

PlasmaPURE Plus ACIDS

PlasmaPURE Plus acids are intended for use in semiconductor, nuclear, clinical, pharmaceutical, geochemical analysis, and wherever the highest purity acids are required. Used for sample and standards preparation for ICP-OES and ICP-MS spectroscopy, where quantification below 1 ppb is commonly required.

Features

Complete with a Certificate of Analysis with lot number, expiry date, & maximum specification for over 60 analytes

- Complete documentation for audit purposes

Packaged in Class 10 clean room conditions

- Supplied in preleached Teflon bottles for optimum quality

Available in sizes from 250 ml to 2 liters

- Flexibility: Buy only what is required or save money with larger volumes

Description	Assay	Molecular Weight	Catalog No.			
			250 ml	500 ml	1L	2L
Acetic Acid	>99% CH ₃ COOH	60.05	250-036-101	250-036-103	250-036-105	---
Ammonia Solution	20-22% NH ₃	17.03	250-036-107	250-036-109	250-036-111	---
Hydrochloric Acid	32-35% HCl	36.46	250-036-113	250-036-115	250-036-117	250-036-119
Hydrofluoric Acid	47-51% HF	20.01	250-036-121	250-036-123	250-036-125	250-036-127
Hydrogen Peroxide	30%	---	---	250-036-145	---	---
Nitric Acid	67-70% HNO ₃	63.01	250-036-129	250-036-131	250-036-133	250-036-135
Sulphuric Acid	93-98% H ₂ SO ₄	98.08	250-036-137	250-036-139	250-036-141	250-036-143

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis

PlasmaPURE Plus

Hydrofluoric Acid (47 - 51% HF)

Catalogue Number: 250-036-121 / 250-036-123 /
250-036-125 / 250-036-127
Lot Number: **SCA5086590**
Assay (HF w/w): **49%**
Expiry Date: **March 2018**

Opened Bottle Expiry Information
15 months after opening, up to unopened expiration date
_____ Date bottle opened

Analyte	Maximum Specification	Actual Value (in ppt)	Analyte	Maximum Specification	Actual Value (in ppt)
Aluminum (Al)	20 ppt	< 5	Neodymium (Nd)	1 ppt	< 0.01
Antimony (Sb)	20 ppt	< 0.02	Nickel (Ni)	20 ppt	< 1
Arsenic (As)	50 ppt	< 20	Niobium (Nb)	10 ppt	< 0.05
Barium (Ba)	10 ppt	< 0.05	Palladium (Pd)	20 ppt	< 0.1
Beryllium (Be)	10 ppt	< 0.01	Platinum (Pt)	20 ppt	< 0.1
Bismuth (Bi)	10 ppt	< 0.02	Potassium (K)	10 ppt	< 2
Boron (B)	100 ppt	< 10	Praseodymium (Pr)	1 ppt	< 0.01
Cadmium (Cd)	10 ppt	< 0.01	Rhenium (Re)	10 ppt	< 0.01
Calcium (Ca)	10 ppt	< 10	Rhodium (Rh)	20 ppt	< 0.01
Cerium (Ce)	10 ppt	< 0.01	Rubidium (Rb)	20 ppt	< 0.01
Cesium (Cs)	10 ppt	< 0.01	Ruthenium (Ru)	20 ppt	< 0.01
Chromium (Cr)	10 ppt	< 0.5	Samarium (Sm)	1 ppt	< 0.01
Cobalt (Co)	10 ppt	< 0.1	Scandium (Sc)	10 ppt	< 0.01
Copper (Cu)	10 ppt	< 1	Selenium (Se)	Information Only	< 5
Dysprosium (Dy)	1 ppt	< 0.01	Silver (Ag)	10 ppt	< 0.5
Erbium (Er)	1 ppt	< 0.01	Sodium (Na)	10 ppt	< 2
Europium (Eu)	1 ppt	< 0.01	Strontium (Sr)	10 ppt	< 0.05
Gadolinium (Gd)	1 ppt	< 0.01	Tantalum (Ta)	Information Only	< 0.01
Gallium (Ga)	10 ppt	< 0.01	Tellurium (Te)	1 ppt	< 0.02
Germanium (Ge)	10 ppt	< 0.01	Terbium (Tb)	1 ppt	< 0.01
Gold (Au)	20 ppt	< 1	Thallium (Tl)	10 ppt	< 0.01
Hafnium (Hf)	10 ppt	< 0.01	Thorium (Th)	1 ppt	< 0.01
Holmium (Ho)	1 ppt	< 0.01	Thulium (Tm)	1 ppt	< 0.01
Indium (In)	1 ppt	< 0.01	Tin (Sn)	20 ppt	< 0.1
Iron (Fe)	10 ppt	< 5	Titanium (Ti)	20 ppt	< 5
Lanthanum (La)	10 ppt	< 0.01	Tungsten (W)	20 ppt	< 20
Lead (Pb)	10 ppt	< 0.05	Uranium (U)	1 ppt	< 0.01
Lithium (Li)	10 ppt	< 0.01	Vanadium (V)	10 ppt	< 0.01
Lutetium (Lu)	1 ppt	< 0.01	Ytterbium (Yb)	1 ppt	< 0.01
Magnesium (Mg)	10 ppt	< 1	Yttrium (Y)	1 ppt	< 0.01
Manganese (Mn)	10 ppt	< 0.05	Zinc (Zn)	10 ppt	< 1
Mercury (Hg)	50 ppt	< 20	Zirconium (Zr)	10 ppt	< 0.5
Molybdenum (Mo)	10 ppt	< 0.5			

Analyte	Maximum Specification	Actual Value (in ppb)
Total Sulphur (S)	100 ppb	< 50

Certified by: Daniel Boisvert
Daniel Boisvert, Chemist

Certification Date: **March 24, 2015**

To maintain product integrity and reduce the risk of trace metal contamination: the inner pack of plastic bags and bottle should be opened under CLASS 100 particle conditions to maintain the integrity of the product. The use of safety apparel, as well as eye protection, plastic gloves, hair net and a clean room suit is also advised. The Material Safety Data Sheet and this Certificate of Analysis are available on our web site. **SCP SCIENCE** is ISO 9001:2008 registered and ISO 17025 accredited (Également disponible en français).

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High Purity Acids

PlasmaPURE ACIDS

PlasmaPURE acids are manufactured with individual trace metal concentrations guaranteed to be equal to or less than 1 ppb. Used for environmental and industrial applications in ICP-OES and AA spectroscopy.

Features

Complete with a Certificate of Analysis with lot number, expiry date, & maximum specification for over 60 analytes.

- Complete documentation for audit purposes

Refined for low trace metals analysis

2 expiry dates (up to 3 years unopened and 15 months opened)

- Long shelf life for unopened bottles

Description	Assay	Molecular Weight	Catalog No.	
			500 ml	2.5 L
Acetic Acid	---	---	---	250-038-201
Hydrochloric Acid	34-37% HCL	36.46	250-038-151	250-038-155
Hydrofluoric Acid	47-51% HF	20.01	250-038-161	---
Nitric Acid	67-70% HNO ₃	63.01	250-038-171	250-038-175
Sulphuric Acid	93-98% H ₂ SO ₄	98.08	250-038-181	250-038-185

ICP-OES and ICP-MS

MATRIX BLANKS

Save time and money with **SCP SCIENCE** prepared, impurity-tested matrix blanks!

Matrix	Catalog No.					
	100 ml	250 ml	500 ml	5 L	10 L	20 L
H ₂ O	140-113-031	140-113-032	140-113-035	140-113-037	---	---
HNO ₃ 5% V/V	140-113-011	140-113-012	140-113-015	140-113-018	140-113-017	140-113-019
HCl 5% V/V	140-113-021	140-113-022	140-113-025	140-113-027	---	---

OTHER CONCENTRATIONS AVAILABLE.

Certificate of Analysis
PlasmaPURE ACIDS

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

PlasmaPURE

Certificate of Analysis

Sulphuric Acid (93 - 98% H₂SO₄)

Catalogue Number: 250-038-181 / 250-038-185

Lot Number: **SCA4168405**
Assay (H₂SO₄ w/w): **94%**
Colour (APHA): **< 7 (Specification: Max 10)**
Expiry Date: **May 2017**

Opened Bottle Expiry Information
15 months after opening, up to unopened expiration date
Date bottle opened _____

Analyte	Maximum Specification	Actual Value (in ppb)	Analyte	Maximum Specification	Actual Value (in ppb)
Aluminum (Al)	1 ppb	< 0.5	Molybdenum (Mo)	0.5 ppb	< 0.1
Antimony (Sb)	1 ppb	< 0.1	Neodymium (Nd)	0.1 ppb	< 0.1
Arsenic (As)	0.5 ppb	< 0.5	Nickel (Ni)	0.5 ppb	< 0.1
Barium (Ba)	0.1 ppb	< 0.1	Niobium (Nb)	0.1 ppb	< 0.1
Beryllium (Be)	0.1 ppb	< 0.1	Palladium (Pd)	Information Only	< 0.5
Bismuth (Bi)	0.1 ppb	< 0.1	Platinum (Pt)	Information Only	< 0.5
Cadmium (Cd)	0.5 ppb	< 0.1	Potassium (K)	1 ppb	< 0.5
Calcium (Ca)	1 ppb	< 0.5	Praseodymium (Pr)	0.1 ppb	< 0.1
Cerium (Ce)	0.1 ppb	< 0.1	Rhodium (Rh)	0.5 ppb	< 0.5
Cesium (Cs)	0.1 ppb	< 0.1	Rubidium (Rb)	0.5 ppb	< 0.5
Chromium (Cr)	0.5 ppb	< 0.1	Samarium (Sm)	0.1 ppb	< 0.1
Cobalt (Co)	0.5 ppb	< 0.1	Scandium (Sc)	0.1 ppb	< 0.1
Copper (Cu)	0.5 ppb	< 0.1	Selenium (Se)	10 ppb	< 5
Dysprosium (Dy)	0.1 ppb	< 0.1	Silver (Ag)	1 ppb	< 0.1
Erbium (Er)	0.1 ppb	< 0.1	Sodium (Na)	1 ppb	< 0.5
Europium (Eu)	0.1 ppb	< 0.1	Strontium (Sr)	0.5 ppb	< 0.1
Gadolinium (Gd)	0.1 ppb	< 0.1	Tantalum (Ta)	Information Only	< 0.5
Gallium (Ga)	0.1 ppb	< 0.1	Tellurium (Te)	0.1 ppb	< 0.1
Germanium (Ge)	1 ppb	< 0.1	Terbium (Tb)	0.1 ppb	< 0.1
Gold (Au)	0.5 ppb	< 0.5	Thallium (Tl)	0.1 ppb	< 0.1
Hafnium (Hf)	0.1 ppb	< 0.1	Thorium (Th)	0.1 ppb	< 0.1
Holmium (Ho)	0.1 ppb	< 0.1	Thulium (Tm)	0.1 ppb	< 0.1
Indium (In)	0.1 ppb	< 0.1	Tin (Sn)	1 ppb	< 0.1
Iron (Fe)	1 ppb	< 0.5	Titanium (Ti)	1 ppb	< 0.5
Lanthanum (La)	0.1 ppb	< 0.1	Tungsten (W)	0.5 ppb	< 0.5
Lead (Pb)	0.1 ppb	< 0.1	Uranium (U)	0.1 ppb	< 0.1
Lithium (Li)	0.5 ppb	< 0.1	Vanadium (V)	0.5 ppb	< 0.1
Lutetium (Lu)	0.1 ppb	< 0.1	Ytterbium (Yb)	0.1 ppb	< 0.1
Magnesium (Mg)	1 ppb	< 0.5	Yttrium (Y)	0.1 ppb	< 0.1
Manganese (Mn)	0.5 ppb	< 0.1	Zinc (Zn)	1 ppb	< 0.2
Mercury (Hg)	0.1 ppb	< 0.02	Zirconium (Zr)	0.5 ppb	< 0.1

Analyte	Maximum Specification	Actual Value (in ppm)	Analyte	Maximum Specification	Actual Value (in ppm)
Chloride (Cl)	0.7 ppm	< 0.1	Nitrate (NO ₃ ⁻)	0.2 ppm	< 0.2
Total Phosphorus (P)	0.05 ppm	< 0.05	Substances reducing permanganate (KMnO ₄)	20 ppm	< 20

Certified by: 
Daniel Boisvert, Chemist

Certification Date: **May 12, 2014**

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