

SCP SCIENCE offers two grades of high purity acids. *PlasmaPURE* and *PlasmaPURE Plus* acids are manufactured for use in trace metal analysis. Supplied with a detailed Certificate of Analysis listing over 60 elements. Select the appropriate grade, either *PlasmaPURE* or *PlasmaPURE Plus*, according to your application requirements. Ideal for use in sample preparation prior to ICP-MS, ICP-OES, and GFAA's.

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## High Purity Acids & Reagents - Notes

High Purity  
Acids & Reagents

### NOTES

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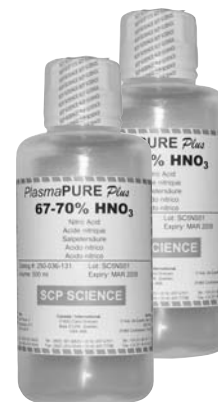
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## PlasmaPURE Plus Acids & Reagents

High Purity  
Acids & Reagents

PlasmaPURE Plus acids are manufactured with trace metal levels less than 10 ppt (0.01 ppb). Commonly used in semiconductor, nuclear, clinical, pharmaceutical, and geochemical analysis. Used for sample and standards preparation for ICP-AES, ICP-MS, Flame AA and Graphite Furnace AA spectroscopy.

- Complete with a Certificate of Analysis with lot number, expiry date, and maximum concentration specification for over 60 elements
  - Complete documentation for audit purposes
- Packaged in Class 10 cleanroom conditions
  - Supplied in preleached Teflon bottles for optimum quality
- Available in sizes from 250 ml to 2 liters
  - Flexibility - Buy only what is required. Save money with large volumes



Maximum Specifications

Element	Acetic Acid (ppt)	Ammonia Solution (ppt)	Nitric Acid (ppt)	Sulphuric Acid (ppt)	Hydrochloric Acid (ppt)	Hydrofluoric Acid (ppt)
Aluminum (Al)	50	20	20	50	20	20
Antimony (Sb)	50	10	10	50	20	20
Arsenic (As)	50	10	20	500	50	50
Barium (Ba)	10	10	10	10	10	10
Beryllium (Be)	10	10	10	10	10	10
Bismuth (Bi)	10	10	10	10	10	10
Boron (B)	N/A	N/A	20	N/A	100	100
Cadmium (Cd)	10	10	10	10	10	10
Calcium (Ca)	50	20	20	100	20	20
Cerium (Ce)	10	10	10	10	10	10
Cesium (Cs)	10	10	10	10	10	10
Chromium (Cr)	10	10	20	10	20	20
Cobalt (Co)	10	10	10	10	10	10
Copper (Cu)	50	20	20	10	20	20
Dysprosium (Dy)	1	10	1	10	1	1
Erbium (Er)	1	10	1	10	1	1
Europium (Eu)	1	10	1	10	1	1
Gadolinium (Gd)	1	10	1	10	1	1
Gallium (Ga)	10	10	10	10	10	10
Germanium (Ge)	10	10	10	100	N/A	10
Gold (Au)	N/A	10	20	N/A	100	20
Hafnium (Hf)	10	N/A	10	10	10	10
Holmium (Ho)	1	10	1	10	1	1
Indium (In)	1	10	1	10	1	1
Iron (Fe)	50	20	20	50	20	20
Lanthanum (La)	1	10	1	10	1	10
Lead (Pb)	10	10	10	10	10	10
Lithium (Li)	10	10	10	10	10	10
Lutetium (Lu)	10	10	1	10	10	1
Magnesium (Mg)	50	20	10	50	10	10

⊗ Glass Container  
✓ Dangerous Goods\*

Ⓢ Poison  
Ⓢ Corrosive

Ⓢ Flammable  
Ⓢ Oxidant

\* as defined by :

• Hazardous Materials Regulations of the U.S. Department of Transportation, Tariff No. BOE-6000-R  
• Canadian Transportation of Dangerous Goods Act and Regulations, Revision December 2000  
• International Air Transport Association - Dangerous Goods Regulation, 40th Edition

USA

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Canada / International

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## PlasmaPURE Plus Acids & Reagents

### Maximum Specifications

Element	Acetic Acid (ppt)	Ammonia Solution (ppt)	Nitric Acid (ppt)	Sulphuric Acid (ppt)	Hydrochloric Acid (ppt)	Hydrofluoric Acid (ppt)
Manganese (Mn)	10	10	10	10	10	10
Mercury (Hg)	N/A	N/A	100	100	100	100
Molybdenum (Mo)	10	10	10	10	10	10
Neodymium (Nd)	1	10	1	10	1	1
Nickel (Ni)	50	10	50	50	50	50
Niobium (Nb)	N/A	10	1	10	1	10
Palladium (Pd)	N/A	N/A	20	N/A	N/A	20
Platinum (Pt)	50	N/A	20	N/A	N/A	20
Potassium (K)	50	20	10	50	10	10
Praseodymium (Pr)	1	10	1	10	1	1
Rhenium (Re)	10	N/A	10	N/A	10	10
Rhodium (Rh)	50	10	10	50	10	20
Rubidium (Rb)	10	10	10	10	10	20
Ruthenium (Ru)	50	N/A	20	N/A	10	20
Samarium (Sm)	1	10	1	10	1	1
Scandium (Sc)	10	10	10	10	10	10
Selenium (Se)	N/A	N/A	N/A	500	N/A	N/A
Silver (Ag)	50	10	10	50	10	10
Sodium (Na)	100	20	10	50	10	10
Strontium (Sr)	10	10	10	10	10	10
Tantalum (Ta)	N/A	N/A	N/A	N/A	N/A	N/A
Tellurium (Te)	1	10	1	100	1	1
Terbium (Tb)	1	10	1	10	1	1
Thallium (Tl)	10	10	10	10	10	10
Thorium (Th)	1	10	1	10	1	1
Thulium (Tm)	1	10	1	10	1	1
Tin (Sn)	50	10	20	50	20	20
Titanium (Ti)	10	10	10	50	20	50
Tungsten (W)	10	10	10	10	10	20
Uranium (U)	1	10	1	10	1	1
Vanadium (V)	10	10	10	10	10	10
Ytterbium (Yb)	1	10	1	10	1	1
Yttrium (Y)	1	10	1	10	1	1
Zinc (Zn)	50	10	20	50	20	20
Zirconium (Zr)	10	10	10	10	10	10

### Always in Stock

Description	Assay	Molecular Weight	CAS Number	Merck Index	Code	250 ml	Catalog Number		
							500 ml	1 L	2 L
Acetic Acid	>99% CH <sub>3</sub> COOH	60.05	64-19-7	13.56	✓ ⑧	250-036-101	250-036-103	250-036-105	---
Ammonia Solution	20-22% NH <sub>3</sub>	17.03	7664-41-7	---	✓ ⑧ ⑥	250-036-107	250-036-109	250-036-111	---
Nitric Acid	67-70% HNO <sub>3</sub>	63.01	7697-37-2	13.6608	✓ ⑧ ⑤	250-036-129	250-036-131	250-036-133	250-036-135
Sulphuric Acid	93-98% H <sub>2</sub> SO <sub>4</sub>	98.08	7664-93-9	13.9064	✓ ⑧ ⑥	250-036-137	250-036-139	250-036-141	250-036-143
Hydrochloric Acid	32-35% HCl	36.46	7647-01-0	13.4801	✓ ⑧	250-036-113	250-036-115	250-036-117	250-036-119
Hydrofluoric Acid	47-51% HF	20.01	7664-39-3	---	✓ ⑧	250-036-121	250-036-123	250-036-125	250-036-127
Hydrogen Peroxide	30%	---	---	---	✓ ⑧ ⑤	---	250-036-145	---	---

⊗ Glass Container  
✓ Dangerous Goods\*

⑥ Poison  
⑧ Corrosive

③ Flammable  
⑤ Oxidant

\* as defined by :

• Hazardous Materials Regulations of the U.S. Department of Transportation, Tariff No. BOE-6000-R  
• Canadian Transportation of Dangerous Goods Act and Regulations, Revision December 2000  
• International Air Transport Association - Dangerous Goods Regulation, 40th Edition

PlasmaPURE acids are manufactured with trace metals equal to or less than 1 ppb. Used for environmental and industrial applications in ICP-AES and flame atomic absorption spectroscopy.

- Complete with a Certificate of Analysis with lot number, expiry date, and maximum specification for over 60 analytes
  - Complete documentation for audit purposes
- Refined for low level trace metal analysis
- 2 expiry dates (up to 3 years unopened & 15 months opened)
  - Long shelf life for unopened bottles



Maximum Specifications

Element	Nitric Acid (ppb)	Hydrofluoric Acid (ppb)	Sulphuric Acid (ppb)	Hydrochloric Acid (ppb)
Aluminum (Al)	1	1	1	1
Antimony (Sb)	1	1	1	1
Arsenic (As)	1	1	1	1
Barium (Ba)	1	1	1	1
Beryllium (Be)	1	1	1	1
Bismuth (Bi)	1	1	1	1
Boron (B)	1	1	N/A	1
Cadmium (Cd)	1	1	1	1
Calcium (Ca)	1	1	1	1
Cerium (Ce)	0.5	0.5	0.5	0.5
Cesium (Cs)	0.5	0.5	0.5	0.5
Chromium (Cr)	1	1	1	1
Cobalt (Co)	1	1	1	1
Copper (Cu)	1	1	1	1
Dysprosium (Dy)	0.5	0.5	0.5	0.5
Erbium (Er)	0.5	0.5	0.5	0.5
Europium (Eu)	0.5	0.5	0.5	0.5
Gadolinium (Gd)	0.5	0.5	0.5	0.5
Gallium (Ga)	1	1	1	1
Germanium (Ge)	1	1	1	N/A
Gold (Au)	1	1	N/A	1
Hafnium (Hf)	0.5	0.5	0.5	0.5
Holmium (Ho)	0.5	0.5	0.5	0.5
Indium (In)	0.5	0.5	0.5	0.5
Iron (Fe)	1	1	1	1
Lanthanum (La)	0.5	0.5	0.5	0.5
Lead (Pb)	1	1	1	1
Lithium (Li)	1	1	1	1
Lutetium (Lu)	0.5	0.5	0.5	0.5
Magnesium (Mg)	1	1	1	1

⊗ Glass Container  
✓ Dangerous Goods\*

Ⓢ Poison  
Ⓢ Corrosive

Ⓢ Flammable  
Ⓢ Oxidant

\* as defined by :

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## PlasmaPURE

## Acids

## Maximum Specifications

Element	Nitric Acid (ppb)	Hydrofluoric Acid (ppb)	Sulphuric Acid (ppb)	Hydrochloric Acid (ppb)
Manganese (Mn)	1	1	1	1
Mercury (Hg)	1	1	1	1
Molybdenum (Mo)	1	1	1	1
Neodymium (Nd)	0.5	0.5	0.5	0.5
Nickel (Ni)	1	1	1	1
Niobium (Nb)	1	0.5	1	1
Palladium (Pd)	0.5	0.5	N/A	N/A
Platinum (Pt)	0.5	0.5	N/A	N/A
Potassium (K)	1	1	1	1
Praseodymium (Pr)	0.5	0.5	0.5	0.5
Rhenium (Re)	0.5	0.5	N/A	0.5
Rhodium (Rh)	0.5	0.5	0.5	0.5
Rubidium (Rb)	0.5	0.5	0.5	0.5
Ruthenium (Ru)	0.5	0.5	N/A	0.5
Samarium (Sm)	0.5	0.5	0.5	0.5
Scandium (Sc)	0.5	0.5	0.5	0.5
Selenium (Se)	1	1	1	1
Silver (Ag)	1	1	1	1
Sodium (Na)	1	1	1	1
Strontium (Sr)	1	1	1	1
Tantalum (Ta)	N/A	N/A	N/A	N/A
Tellurium (Te)	0.5	0.5	0.5	0.5
Terbium (Tb)	0.5	0.5	0.5	0.5
Thallium (Tl)	1	0.5	1	1
Thorium (Th)	1	1	1	1
Thulium (Tm)	0.5	0.5	0.5	0.5
Tin (Sn)	1	1	1	1
Titanium (Ti)	1	1	1	1
Tungsten (W)	0.5	0.5	0.5	0.5
Uranium (U)	1	1	1	1
Vanadium (V)	1	1	1	1
Ytterbium (Yb)	0.5	0.5	0.5	0.5
Yttrium (Y)	0.5	0.5	0.5	0.5
Zinc (Zn)	1	1	1	1
Zirconium (Zr)	1	1	1	1

## Always in Stock

Element	Assay	Molecular Weight	CAS Number	Merck Index	Code	500 ml	Catalog Number		
							2.5L	2.5L SC*	4L
Nitric Acid	67-70% HNO <sub>3</sub>	63.01	7697-37-2	13.6608	✓ ⊗ ⊗ ⊕	250-037-129	250-037-131	250-037-133	---
Hydrofluoric Acid**	47-51% HF	20.01	7664-39-3	N/A	✓ ⊗	250-037-121	---	---	250-037-123
Sulphuric Acid	94-98% H <sub>2</sub> SO <sub>4</sub>	98.08	7664-93-9	13.9064	✓ ⊗ ⊗ ⊕	250-037-137	250-037-139	250-037-141	---
Hydrochloric Acid	33-36% HCL	36.46	7647-01-0	13.4801	✓ ⊗ ⊗	250-037-113	250-037-115	250-037-117	250-037-119

\* Coated Glass Bottle

\*\* Packaged in LDPE Bottle

⊗ Glass Container  
✓ Dangerous Goods\*⊕ Poison  
⊗ Corrosive⊕ Flammable  
⊕ Oxidant

\* as defined by :

\* Hazardous Materials Regulations of the U.S. Department of Transportation, Tariff No. BOE-6000-R  
\* Canadian Transportation of Dangerous Goods Act and Regulations, Revision December 2000  
\* International Air Transport Association - Dangerous Goods Regulation, 40th Edition

Certificate of Analysis:  
PlasmaPURE Plus Acid

High Purity  
Acids & Reagents

# Certificate of Analysis

PlasmaPURE Plus

NITRIC ACID (67-70% HNO<sub>3</sub>)

Catalogue Number:  
Lot Number:  
Assay (HNO<sub>3</sub> w/w):  
Expiry Date:

250-036-131  
SC5NS01  
70%  
January 2008

**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	<10	Neodymium (Nd)	1 ppt	< 0.05
Antimony (Sb)	10 ppt	<10	Nickel (Ni)	50 ppt	<10
Arsenic (As)	20 ppt	<10	Niobium (Nb)	1 ppt	<1
Barium (Ba)	10 ppt	<1	Palladium (Pd)	20 ppt	<10
Beryllium (Be)	10 ppt	<5	Platinum (Pt)	20 ppt	<1
Bismuth (Bi)	10 ppt	<0.1	Potassium (K)	10 ppt	<5
Boron (B)	20 ppt	<10	Praseodymium (pr)	1 ppt	<0.05
Cadmium (Cd)	10 ppt	<1	Rhenium (Re)	10 ppt	<1
Calcium (Ca)	20 ppt	<10	Rhodium (Rh)	10 ppt	<1
Cerium (Ce)	10 ppt	<0.05	Rubidium (Rb)	10 ppt	<1
Cesium (Cs)	10 ppt	<0.05	Ruthenium (Ru)	20 ppt	<10
Chromium (Cr)	20 ppt	<10	Samarium (Sm)	1 ppt	<0.01
Cobalt (Co)	10 ppt	<1	Scandium (Sc)	10 ppt	<20
Copper (Cu)	20 ppt	<3	Selenium (Se)	Information Only	<20
Dysprosium (Dy)	1 ppt	<0.01	Silver (Ag)	10 ppt	<2
Erbium (Er)	1 ppt	<0.01	Sodium (Na)	10 ppt	<5
Europium (Eu)	1 ppt	<0.01	Strontium (Sr)	10 ppt	<1
Gadolinium (Gd)	1 ppt	<0.01	Tantalum (Ta)	Information Only	<10
Gallium (Ga)	10 ppt	<1	Tellurium (Te)	1 ppt	<1
Germanium (Ge)	10 ppt	<1	Terbium (Tb)	1 ppt	<0.01
Gold (Au)	20 ppt	<10	Thallium (Tl)	10 ppt	<0.1
Hafnium (Hf)	10 ppt	<0.05	Thorium (Th)	1 ppt	<0.05
Holmium (Ho)	1 ppt	<0.01	Thulium (Tm)	1 ppt	<0.01
Indium (In)	1 ppt	<1	Tin (Sn)	20 ppt	<10
Iron (Fe)	20 ppt	<10	Titanium (Ti)	10 ppt	<10
Lanthanum (La)	1 ppt	<0.05	Tungsten (W)	10 ppt	<5
Lead (Pb)	10 ppt	<1	Uranium (U)	1 ppt	<0.01
Lithium (Li)	10 ppt	<1	Vanadium (V)	10 ppt	<1
Lutetium (Lu)	1 ppt	<0.01	Ytterbium (Yb)	1 ppt	<0.01
Magnesium (Mg)	10 ppt	<5	Yttrium (Y)	1 ppt	<1
Manganese (Mn)	10 ppt	<2	Zinc (Zn)	20 ppt	<5
Mercury (Hg)	100 ppt	<100	Zirconium (Zr)	10 ppt	<1
Molybdenum (Mo)	10 ppt	<1			

Certified by:   
Alketa Mixha, Chemist

Certification Date: **January 27, 2005**

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. (Ce certificat est également disponible en français)

Manufactured according to an ISO 9001:2000 Quality System and ISO 17025 (in-process)

**SCP SCIENCE**  
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Phone : (514) 457-0701 Fax : (514) 457-4499  
Web Site: www.scpscience.com



## Certificate of Analysis:

## PlasmaPURE Acid

## Certificate of Analysis

PlasmaPURE

HYDROCHLORIC ACID (34-37% HCl)

Catalogue Number:

250-037-113

Lot Number:

SC5HS02

Assay (HCl w/w):

36%

Expiry Date:

January 2008

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

Certified by:

Alketa Mixha, Chemist

Certification Date: **January 27, 2005**

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. (Ce certificat est également disponible en français)

Manufactured according to an ISO 9001:2000 Quality System and ISO 17025 (in-process)

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