SCP SCIENCE manufactures and distributes products for Ion Chromatography. A large selection of single and multi-element anion and cation calibration standards are available and are directly traceable to the National Institute of Standards and Technology (NIST) standards. Save time and labour by purchasing prepared calibration standards.

Ion Chromatography Standards - Notes

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*Accu*SPEC
Ion Chromatography Standards

Ion Chromatography is a vital component of inorganic analysis. Traditional single ion calibration standards, multi ion standards and eluents as well as custom solutions are available.

- Complete Certificate of Analysis is included with NIST traceability
  - Complete documentation for audit purposes
- Multi-Element Standards available
  - Custom standards designed to your specifications
  - Popular "Off the Shelf" multi element standards for quick delivery and cost saving
- Eluents available as concentrates or working solutions
  - Eluents prepared following rigid specifications

Single Ion Chromatography Standards

Anion Standard	Symbol	Matrix	Code	Catalog Number 125 ml 1000 µg/ml	Catalog Number 500 ml 1000 µg/ml	Catalog Number 125 ml 10 000 µg/ml	Catalog Number 500 ml 10 000 µg/ml
Acetate	CH_3COO^-	H_2O		250-220-100	250-220-101	---	---
Ammonia-Nitrogen	NH_3^- as N	H_2O		250-220-115	250-220-116	---	---
Bromate	BrO_3^-	H_2O		250-220-220	250-220-221	---	---
Bromide	Br^-	H_2O		250-220-235	250-220-236	250-221-235	250-221-236
Chlorate	ClO_3^-	H_2O		250-220-355	250-220-356	---	---
Chloride	Cl^-	H_2O		250-220-370	250-220-371	250-180-231	250-180-235
Fluoride	F^-	H_2O		250-220-400	250-220-401	250-221-400	250-221-401
Formate	$HCOO^-$	H_2O		250-220-415	250-220-416	---	---
Nitrate	NO_3^-	H_2O		250-220-505	250-220-506	250-221-505	250-221-506
Nitrate-Nitrogen	NO_3^- as N	H_2O		250-220-520	250-220-521	---	---
Nitrite	NO_2^-	H_2O		250-220-535	250-220-536	250-221-535	250-221-536
Nitrite-Nitrogen	NO_2^- as N	H_2O		250-220-550	250-220-551	---	---
Oxalate	$C_2O_4^{2-}$	H_2O		250-220-565	250-220-566	---	---
Perchlorate	ClO^{4-}	H_2O		250-220-580	250-220-581	---	---
Phosphate	PO_4^{3-}	H_2O		250-220-595	250-220-596	250-221-595	250-221-596
Phosphate-Phosphorus	PO_4^{3-} as P	H_2O		250-220-610	250-220-611	---	---
Sulfate	SO_4^{2-}	H_2O		250-220-700	250-220-701	250-221-700	250-221-701
Sulfate-Sulfur	SO_4^{2-} as S	H_2O		250-220-715	250-220-716	---	---

Cation Standard	Symbol	Matrix	Code	Catalog Number 125 ml 1000 µg/ml	Catalog Number 500 ml 1000 µg/ml	Catalog Number 125 ml 10 000 µg/ml	Catalog Number 500 ml 10 000 µg/ml
Ammonium	NH_4^+	H_2O		250-220-130	250-220-131	---	---
Barium	Ba^{2+}	H_2O		250-220-175	250-220-176	---	---
Calcium	Ca^{2+}	H_2O		250-220-250	250-220-251	250-221-250	250-221-251
Lithium	Li^+	H_2O		250-220-445	250-220-446	---	---
Magnesium	Mg^{2+}	H_2O		250-220-460	250-220-461	250-221-460	250-221-461
Potassium	K^+	H_2O		250-220-625	250-220-626	250-221-625	250-221-626
Sodium	Na^+	H_2O		250-220-640	250-220-641	250-221-640	250-221-641
Strontium	Sr^{2+}	H_2O		250-220-685	250-220-686	---	---

⊗ *Glass Container* ⑥ *Poison* ③ *Flammable*
✓ *Dangerous Goods** ⑧ *Corrosive* 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

Multi-Ion Standards

Multi-Ion Standard 1

Ion	Concentration
Cl^-	30 µg/ml
F^-	20 µg/ml
NO_3^-	100 µg/ml
PO_4^{3-}	150 µg/ml
SO_4^{2-}	150 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
140-315-001		125 ml
140-315-005		500 ml

Multi-Ion Standard 2

Solution A

Ion	Concentration
Cl^-	10 µg/ml
F^-	10 µg/ml
NO_3^-	10 µg/ml
PO_4^{3-}	10 µg/ml
SO_4^{2-}	10 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
141-315-011		125 ml
141-315-015		500 ml

Solution B

Ion	Concentration
NO_2^-	10 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
141-315-021		125 ml
141-315-025		500 ml

Solution A & B Set

Catalog Number	Code	Volume
140-315-011		125 ml
140-315-015		500 ml

Multi-Ion Standard 3

Solution A

Ion	Concentration
Br^-	100 µg/ml
Cl^-	100 µg/ml
F^-	100 µg/ml
NO_3^-	100 µg/ml
PO_4^{3-}	100 µg/ml
SO_4^{2-}	100 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
251-225-011		125 ml
251-225-015		500 ml

Solution B

Ion	Concentration
NO_2^-	100 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
251-225-021		125 ml
251-225-025		500 ml

Solution A & B Set

Catalog Number	Code	Volume
250-225-001		125 ml
250-225-005		500 ml

Multi-Ion Standard 4

Solution A

Ion	Concentration
Br^-	1000 µg/ml
Cl^-	1000 µg/ml
F^-	1000 µg/ml
NO_3^-	1000 µg/ml
PO_4^{3-}	1000 µg/ml
SO_4^{2-}	1000 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
251-225-101		125 ml
251-225-105		500 ml

Solution B

Ion	Concentration
NO_2^-	1000 µg/ml

Matrix: H_2O

Catalog Number	Code	Volume
251-225-111		125 ml
251-225-115		500 ml

Solution A & B Set

Catalog Number	Code	Volume
250-225-101		125 ml
250-225-105		500 ml

⊗ *Glass Container* ⑥ *Poison* ③ *Flammable*
✓ *Dangerous Goods** ⑧ *Corrosive* ⑤ *Oxidant*

* as defined by :
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- International Air Transport Association - Dangerous Goods Regulation, 40th Edition

Eluent and Chelaton Solutions for Ion Chromatography

Eluent Solutions	Symbol	Concentration	Code	Catalog Number 100 ml	500 ml	1 L
Bicarbonate/Sodium Hydroxide*		0.003/0.002 M	✓ ⑧	---	---	---
Bicarbonate/Sodium Hydroxide concentrate		0.3/0.2 M	✓ ⑧	250-220-205	---	---
Carbonate/Bicarbonate*		0.0018/0.0017 M		---	---	---
Carbonate/Bicarbonate*		0.0022/0.0028 M		---	---	---
Carbonate/Bicarbonate*		0.003/0.0024 M		---	---	---
Carbonate/Bicarbonate concentrate		0.18/0.17 M		250-220-310	---	---
Carbonate/Bicarbonate concentrate		0.22/0.28 M		250-220-325	---	---
Carbonate/Bicarbonate concentrate		0.30/0.24 M		250-220-340	---	---
Hydrochloric Acid Eluent concentrate	HCl	1 M	✓ ⑧ ⊗	250-220-430	250-220-431	250-220-432
Methanesulfonic Acid concentrate	CH_3SO_3H	1 M	✓ ⑧ ⊗	---	---	250-220-490
Methanesulfonic Acid	CH_3SO_3H	20 mM	✓ ⑧	---	---	250-220-475
Sodium Bicarbonate Eluent concentrate	$NaHCO_3$	0.5 M		250-220-655	250-220-656	250-220-657
Sodium Carbonate Eluent concentrate	Na_2CO_3	0.5 M		250-220-670	250-220-671	250-220-672

*** Available in 10 and 20 L volumes**

Chelation Solutions	Symbol	Concentration	Code	Catalog Number 500 ml	1L	5 L
Ammonium Acetate	CH_3COONH_4	2 M		250-220-145	250-220-146	250-220-147
Ammonium Nitrate	NH_4NO_3	0.1 M		250-220-160	250-220-161	250-220-162
Nitric Acid*	HNO_3	2 M	✓ ⑧	250-035-100	250-035-101	250-035-102

*** Also available in 10 and 20L volumes**

⊗ *Glass Container* ⑥ *Poison* ③ *Flammable*
✓ *Dangerous Goods** ⑧ *Corrosive* 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

*Accu*SPEC ISE Standards and Reagents

Standards, reagents, and filling solutions for most ion selective and pH electrodes.
- Manufactured and tested under ISO Quality Programs
- Direct equivalent to original manufacturers' products

Certificate of Analysis: Ion Chromatography Standard

Certificate of Analysis

Catalogue numbers : **250-220-370/250-220-371**
Description : ***Accu*SPEC – IC Standard Chloride 1000 µg/ml**

Lot Number : **SC4328999**
Expiry Date : **September 2006**
(*unopened bottle*)

Opened Bottle Expiry Information
15 months after opening, up to unopened expiration date

_____
Date bottle opened

Cl-

This standard analyzed by Ion chromatography (IC) is traceable to NIST Standard Reference Material: 3182

Actual Value : **993 µg/ml**

Certified by : _____ **Date of certification : December 7, 2004**
Alketa Mixha, Chemist

This IC Standard is guaranteed to be stable and accurate to within ± 1% of the actual concentration up to the unopened expiry date, if sealed, or 12 months after opening of the bottle, up to the unopened expiry date provided the solution is kept tightly capped and stored, at 4°C, under normal laboratory conditions. For these solutions, 18 megohm/cm double deionized water, and Class A glassware are used. 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
21800 Clark Graham, Baie D'Urfé, QC, Canada H9X 4B6
Phone : (514) 457-0701 Fax : (514) 457-4499
Web Site: www.scpscience.com

Ion Chromatography Standards Request Form

Complete this form to receive a quotation for your specific Custom Multi-Ion Standard or to enter your purchase order. Photocopy for use with multiple requests.

Contact Information:

Name: _____

Title: _____

Company: _____

Mailing Address: _____

City: _____ Province/State: _____ PC/Zip: _____ Country: _____

Telephone: _____ Fax: _____

E-mail: _____ Account No: _____

Please indicate the concentration required for each element:

Anion Custom Multi-Ion Standard	Cation Custom Multi-Ion Standard
Acetate	Ammonium
Bromate	Ammonia-Nitrogen
Bromide	Barium
Chlorate	Calcium
Chloride	Lithium
Fluoride	Magnesium
Formate	Potassium
Nitrate	Sodium
Nitrate-Nitrogen	Strontium
Nitrite	**Matrix Required:** _____
Nitrite-Nitrogen	_____
Oxlate	
Perchlorate	**Rate of Use (L/yr):** _____
Phosphate	_____
Phosphate-Phosphorus	
Sulfate	**Special Requirements:** _____
Sulfate-Sulfur	_____

☐ Please Send me a Quotation

☐ Please Enter my Purchase Order # _____

Fax form back to:

USA	**(800) 253-5549**
Canada / International	**(800) 253-5549 / (514) 457-4499**
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Atomic Absorption Standards - Notes

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