



Ion Chromatography

- 99.99% High Purity Starting Materials
- 18 Megohm, ASTM type I de-ionized Water
- Packaged in pre-cleaned high quality HDPE bottles.
- Each Standard is Supplied with a Certificate of Analysis, stating traceability to NIST, certified value and expiration date.
- Final Solution is filtered through a 0.2 µm filter to eliminate contaminants (such as suspended solids and microbes). This extends shelf life and protects your column.
- Ready-To-Use Mixes and Calibration Sets.
- Standards may be used for other "Classical or Wet" methods.

Anions

Water Matrix	Unit	100 µg/mL		
		Cat. No.	Cat. No.	Cat. No.
■ Acetate	100 mL	IC-ACET-1X-1	-----	IC-ACET-10X-1
	500 mL	IC-ACET-1X-5	-----	IC-ACET-10X-5
Br (Bromate) NEW	100 mL	-----	-----	IC-BROM-10X-1
	500 mL	-----	-----	IC-BROM-10X-5
Br (Bromide)	100 mL	IC-BR-1X-1	IC-BR-2X-1	IC-BR-10X-1
	500 mL	IC-BR-1X-5	IC-BR-2X-5	IC-BR-10X-5
■ Chlorate	100 mL	IC-CHLR-1X-1	-----	IC-CHLR-10X-1
	500 mL	IC-CHLR-1X-5	-----	IC-CHLR-10X-5
Citrate NEW	100 mL	-----	-----	IC-CITR-10X-1
Cl (Chloride)	100 mL	IC-CI-1X-1	IC-CI-2X-1	IC-CI-10X-1
	500 mL	IC-CI-1X-5	IC-CI-2X-5	IC-CI-10X-5
■ Chromate	100 mL	IC-CHRM-1X-1	-----	IC-CHRM-10X-1
	500 mL	IC-CHRM-1X-5	-----	IC-CHRM-10X-5
F (Fluoride)	100 mL	IC-F-1X-1	IC-F-2X-1	IC-F-10X-1
	500 mL	IC-F-1X-5	IC-F-2X-5	IC-F-10X-5
■ Formate	100 mL	IC-FORM-1X-1	-----	IC-FORM-10X-1
	500 mL	IC-FORM-1X-5	-----	IC-FORM-10X-5
Glycolate NEW	100 mL	-----	-----	IC-GLYC-10X-1
Iodide	100 mL	-----	-----	IC-I-10X-1
Lactate NEW	100 mL	-----	-----	IC-LACT-10X-1
Malate NEW	100 mL	-----	-----	IC-MALA-10X-1
Maleate NEW	100 mL	-----	-----	IC-MALE-10X-1
NO ₂ (Nitrite)	100 mL	IC-NO2-1X-1	IC-NO2-2X-1	IC-NO2-10X-1
	500 mL	IC-NO2-1X-5	IC-NO2-2X-5	IC-NO2-10X-5
NO ₃ (Nitrate)	100 mL	IC-NO3-1X-1	IC-NO3-2X-1	IC-NO3-10X-1
	500 mL	IC-NO3-1X-5	IC-NO3-2X-5	IC-NO3-10X-5
■ Oxalate	100 mL	IC-OXAL-1X-1	-----	IC-OXAL-10X-1
	500 mL	IC-OXAL-1X-5	-----	IC-OXAL-10X-5
Perchlorate NEW	100 mL	-----	-----	IC-PER-10X-1
Phthalate NEW	100 mL	-----	-----	IC-PHTH-10X-1
PO ₄ (Phosphate)	100 mL	IC-PO4-1X-1	IC-PO4-2X-1	IC-PO4-10X-1
	500 mL	IC-PO4-1X-5	IC-PO4-2X-5	IC-PO4-10X-5
Propionate NEW	100 mL	-----	-----	IC-PROP-10X-1
Succinate NEW	100 mL	-----	-----	IC-SUCC-10X-1
SO ₄ (Sulfate)	100 mL	IC-SO4-1X-1	IC-SO4-2X-1	IC-SO4-10X-1
	500 mL	IC-SO4-1X-5	IC-SO4-2X-5	IC-SO4-10X-5
Tartrate NEW	100 mL	-----	-----	IC-TART-10X-1

■ Organic Acid Salt Standards

Anion Kits

IC-AN-1X-1-SET 7 x 100 mL

IC-AN-1X-5-SET 7 x 500 mL

Each at 100 µg/mL in Water

IC-AN-2X-1-SET 7 x 100 mL

IC-AN-2X-5-SET 7 x 500 mL

Each at 200 µg/mL in Water

IC-AN-10X-1-SET 7 x 100 mL

IC-AN-10X-5-SET 7 x 500 mL

Each at 1000 µg/mL in Water

Fluoride	Bromide
Chloride	Phosphate
Nitrite	Sulfate
Nitrate	

These products do not require Hazardous Shipping charges at this time



Ion Chrom - Ion Singles as the Element

	Unit	100 µg/mL	1000 µg/mL
NO₂-N (Nitrite-Nitrogen)	100 mL	IC-NO2-N-1X-1	IC-NO2-N-10X-1
Water Matrix	500 mL	IC-NO2-N-1X-5	IC-NO2-N-10X-5
NO₃-N (Nitrate-Nitrogen)	100 mL	IC-NO3-N-1X-1	IC-NO3-N-10X-1
Water Matrix	500 mL	IC-NO3-N-1X-5	IC-NO3-N-10X-5
PO₄-P (Phosphate-Phosphorous)	100 mL	IC-PO4-P-1X-1	IC-PO4-P-10X-1
Water Matrix	500 mL	IC-PO4-P-1X-5	IC-PO4-P-10X-5
SO₄-S (Sulfate-Sulfur)	100 mL	IC-SO4-S-1X-1	IC-SO4-S-10X-1
Water Matrix	500 mL	IC-SO4-S-1X-5	IC-SO4-S-10X-5
NH₄-N (Ammonium-Nitrogen)	100 mL	IC-NH4-N-1X-1	IC-NH4-N-10X-1
Water Matrix	500 mL	IC-NH4-N-1X-5	IC-NH4-N-10X-5

Organic Acid Salt Standard

	Unit	100 µg/mL	1000 µg/mL
Formate	100 mL	IC-FORM-1X-1	IC-FORM-10X-1
Water Matrix	500 mL	IC-FORM-1X-5	IC-FORM-10X-5
Acetate	100 mL	IC-ACET-1X-1	IC-ACET-10X-1
Water Matrix	500 mL	IC-ACET-1X-5	IC-ACET-10X-5
Oxalate	100 mL	IC-OXAL-1X-1	IC-OXAL-10X-1
Water Matrix	500 mL	IC-OXAL-1X-5	IC-OXAL-10X-5
Chlorate	100 mL	IC-CHLR-1X-1	IC-CHLR-10X-1
Water Matrix	500 mL	IC-CHLR-1X-5	IC-CHLR-10X-5
Chromate	100 mL	IC-CHRM-1X-1	IC-CHRM-10X-1
Water Matrix	500 mL	IC-CHRM-1X-5	IC-CHRM-10X-5

Anion Single Kits

IC-AN-KIT-R-10X-1-SET	7 x 100 mL
IC-AN-KIT-R-10X-5-SET	7 x 500 mL

Each at 1000 µg/mL

Fluoride
Chloride
Nitrite-Nitrogen
Nitrate-Nitrogen

Bromide
Phosphate-Phosphorous
Sulfate-Sulfur



Method 314.0 Perchlorate in Drinking Water by IC

Perchlorate has become an analyte of environmental interest since being detected in a number of drinking and groundwater supplies located in Midwestern states. EPA method 314.0 was released as an approved method to achieve the required sensitivity.

Perchlorate Standard

IC-PER-10X-1 100 mL
1000 µg/mL in Water

Perchlorate

Conductivity Meter Calibration Standard

M-314.0-CMCS-1 100 mL
1410 µs/cm @ 25°C in Water

Mixed Common Anion Stock

M-314.0-MCA-250X-1 100 mL
25 mg/mL in Water 3 comps.

Chloride
Sulfate
Carbonate

Method 314.0 Perchlorate Calibration Set

M-314.0-SET 100 mL

IC-PER-10X-1
M-314.0-MCA-250X-1
M-314.0-CMCS-1



Ion Chrom Eluents

0.5 M Sodium bicarbonate (100X concentrate)	50 mL	100 mL	5 x 50 mL	5 x 100 mL
	IC-ELU-01-0.5	IC-ELU-01-1	IC-ELU-01-0.5-PAK	IC-ELU-01-1-PAK
0.5 M Sodium carbonate (100X concentrate)	50 mL	100 mL	5 x 50 mL	5 x 100 mL
	IC-ELU-02-0.5	IC-ELU-02-1	IC-ELU-02-0.5-PAK	IC-ELU-02-1-PAK
0.18 M Sodium carbonate/ 0.17 M Sodium bicarbonate (100X concentrate)	50 mL	100 mL	5 x 50 mL	5 x 100 mL
	IC-ELU-03-0.5	IC-ELU-03-1	IC-ELU-03-0.5-PAK	IC-ELU-03-1-PAK

Technical Note

Easy to use, ready to dilute concentrates. Open a fresh bottle and dilute the volume (50 mL to 5 L or 100 mL to 10 L) and be assured of a fresh uncontaminated mobile phase

These products do not require Hazardous Shipping charges at this time



Ion Chromatography

Anion Mixes

Anion Mix #1

IC-MAN-01-1	100 mL
Water Matrix	5 comps.
F (Fluoride)	20 µg/mL
Cl (Chloride)	30 µg/mL
NO ₃ (Nitrate)	100 µg/mL
PO ₄ (Phosphate)	150 µg/mL
SO ₄ (Sulfate)	150 µg/mL

Anion Mix #2

IC-MAN-02-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	100 µg/mL
Cl (Chloride)	200 µg/mL
Br (Bromide)	400 µg/mL
NO ₃ (Nitrate)	400 µg/mL
PO ₄ (Phosphate)	600 µg/mL
SO ₄ (Sulfate)	400 µg/mL

Anion Mix #3

IC-MAN-03-1	100 mL
Water Matrix	3 comps.
F (Fluoride)	100 µg/mL
Cl (Chloride)	100 µg/mL
SO ₄ (Sulfate)	100 µg/mL

Anion Mix #4

IC-MAN-04-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	100 µg/mL
Cl (Chloride)	100 µg/mL
Br (Bromide)	100 µg/mL
NO ₃ (Nitrate)	100 µg/mL
PO ₄ (Phosphate)	100 µg/mL
SO ₄ (Sulfate)	100 µg/mL

Anion Mix #5

IC-MAN-05-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	10 µg/mL
Cl (Chloride)	20 µg/mL
Br (Bromide)	20 µg/mL
NO ₃ (Nitrate)	20 µg/mL
PO ₄ (Phosphate)	5 µg/mL
SO ₄ (Sulfate)	30 µg/mL

Anion Mix #6

IC-MAN-06-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	1 µg/mL
Cl (Chloride)	5 µg/mL
Br (Bromide)	5 µg/mL
NO ₃ (Nitrate)	5 µg/mL
PO ₄ (Phosphate)	5 µg/mL
SO ₄ (Sulfate)	10 µg/mL

Technical Note

To enhance the shelf life and long term stability of our IC products, Nitrite has been split out of mixes that contain Nitrate.

Anion Mix #7

IC-MAN-07-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	1 µg/mL
Cl (Chloride)	10 µg/mL
Br (Bromide)	10 µg/mL
NO ₃ (Nitrate)	10 µg/mL
PO ₄ (Phosphate)	10 µg/mL
SO ₄ (Sulfate)	10 µg/mL

Anion Mix #8

IC-MAN-08-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	10 µg/mL
Cl (Chloride)	20 µg/mL
Br (Bromide)	20 µg/mL
NO ₃ (Nitrate)	20 µg/mL
PO ₄ (Phosphate)	20 µg/mL
SO ₄ (Sulfate)	20 µg/mL

Anion Mix #9

IC-MAN-09-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	20 µg/mL
Cl (Chloride)	40 µg/mL
Br (Bromide)	40 µg/mL
NO ₃ (Nitrate)	40 µg/mL
PO ₄ (Phosphate)	40 µg/mL
SO ₄ (Sulfate)	40 µg/mL

Anion Mix #10

IC-MAN-10-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	25 µg/mL
Cl (Chloride)	50 µg/mL
Br (Bromide)	50 µg/mL
NO ₃ (Nitrate)	50 µg/mL
PO ₄ (Phosphate)	50 µg/mL
SO ₄ (Sulfate)	50 µg/mL

IC Anion Set

IC-MAN-CAL-SET
5 units
Contains one each of:

- CLP-BLW-5 (500 mL)
- IC-MAN-07-R1-1 (100 mL)
- IC-MAN-08-R1-1 (100 mL)
- IC-MAN-09-R1-1 (100 mL)
- IC-MAN-10-R1-1 (100 mL)

Technical Note

This Ready-to-Use set of standards can be used to generate a 5 point calibration curve (including blank)

Technical Note

We offer several Nitrite concentrations that can be added just prior to analysis for maximum stability.

Anion Mix #11

IC-MAN-11-1	100 mL
Water Matrix	5 comps.
Cl (Chloride)	1000 µg/mL
Br (Bromide)	1000 µg/mL
NO ₃ (Nitrate)	1000 µg/mL
PO ₄ (Phosphate)	1000 µg/mL
SO ₄ (Sulfate)	1000 µg/mL

Anion Mix #12

IC-MAN-12-1	100 mL
Water Matrix	5 comps.
Cl (Chloride)	15 µg/mL
Br (Bromide)	15 µg/mL
NO ₃ (Nitrate)	15 µg/mL
PO ₄ (Phosphate)	15 µg/mL
SO ₄ (Sulfate)	15 µg/mL

Anion Mix #13

IC-MAN-13-1	100 mL
Water Matrix	3 comps.
F (Fluoride)	25 µg/mL
Cl (Chloride)	50 µg/mL
SO ₄ (Sulfate)	100 µg/mL

Anion Mix #14

IC-MAN-14-R3-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	20 µg/mL
Cl (Chloride)	30 µg/mL
NO ₃ (Nitrate)	100 µg/mL
Br (Bromide)	100 µg/mL
PO ₄ (Phosphate)	150 µg/mL
SO ₄ (Sulfate)	150 µg/mL

Anion Mix #14 plus IC-NO2-N-1X is perfect for US EPA Method 300.1

Anion Mix #14 Revised

IC-MAN-14-R2-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	20 µg/mL
Cl (Chloride)	30 µg/mL
Br (Bromide)	100 µg/mL
N-NO ₃ (Nitrogen-Nitrate)	100 µg/mL
P-PO ₄ (Phosphorus-Phosphate)	150 µg/mL
SO ₄ (Sulfate)	150 µg/mL

Technical Note

This "Determination of Inorganic Anions by Ion Chromatography" and **ASTM D-4327**, "Test Method for Anions in Water by Chemically Suppressed Ion Chromatography."

Nitrite

IC-NO2-10X-1	100 mL
NO ₂ (Nitrite)	1000 µg/mL
IC-NO2-1X-1	100 mL
NO ₂ (Nitrite)	100 µg/mL
IC-NO2-0.1X-1	100 mL
NO ₂ (Nitrite)	10 µg/mL
IC-NO2-N-1X-1	100 mL
NO ₂ (Nitrite)	100 µg/mL

Anion Mix #15

IC-MAN-15-R2-1	100 mL
Water Matrix	3 comps.
F (Fluoride)	100 µg/mL
NO ₃ (Nitrate)	100 µg/mL
PO ₄ (Phosphate)	100 µg/mL

Anion Mix #16

IC-MAN-16-R1-1	100 mL
Water Matrix	6 comps.
F (Fluoride)	100 µg/mL
Cl (Chloride)	200 µg/mL
Br (Bromide)	100 µg/mL
NO ₃ (Nitrate)	20 µg/mL
PO ₄ (Phosphate)	30 µg/mL
SO ₄ (Sulfate)	20 µg/mL

Anion Mix #17

IC-MAN-17-R1-1	100 mL
Water Matrix	5 comps.
Cl (Chloride)	20 µg/mL
Br (Bromide)	12 µg/mL
NO ₃ (Nitrate)	12 µg/mL
PO ₄ (Phosphate)	12 µg/mL
SO ₄ (Sulfate)	80 µg/mL

Anion Mix #18

IC-MAN-18-R1-1	100 mL
Water Matrix	5 comps.
F (Fluoride)	100 µg/mL
Cl (Chloride)	100 µg/mL
NO ₃ (Nitrate)	100 µg/mL
PO ₄ (Phosphate)	100 µg/mL
SO ₄ (Sulfate)	100 µg/mL

Dichloroacetate Surrogate Standard

M-300.1-SS
100 mL
0.5 mg/mL Dichloroacetate in Water

These products do not require Hazardous Shipping charges at this time



Ion Chrom - Cation Singles

Dilute HNO ₃ Matrix	Unit	100 µg/mL		200 µg/mL		1,000 µg/mL	
		Cat. No.		Cat. No.		Cat. No.	
Ca (Calcium)	100 mL	IC-CA-1X-1		IC-CA-2X-1		IC-CA-10X-1	
	500 mL	IC-CA-1X-5		IC-CA-2X-5		IC-CA-10X-5	
NH ₄ (Ammonium)	100 mL	IC-NH4-1X-1		IC-NH4-2X-1		IC-NH4-10X-1 †	
	500 mL	IC-NH4-1X-5		IC-NH4-2X-5		IC-NH4-10X-5 †	
Mg (Magnesium)	100 mL	IC-MG-1X-1		IC-MG-2X-1		IC-MG-10X-1	
	500 mL	IC-MG-1X-5		IC-MG-2X-5		IC-MG-10X-5	
K (Potassium)	100 mL	IC-K-1X-1		IC-K-2X-1		IC-K-10X-1	
	500 mL	IC-K-1X-5		IC-K-2X-5		IC-K-10X-5	
Na (Sodium)	100 mL	IC-NA-1X-1		IC-NA-2X-1		IC-NA-10X-1	
	500 mL	IC-NA-1X-5		IC-NA-2X-5		IC-NA-10X-5	
Li (Lithium)	100 mL	IC-LI-1X-1		IC-LI-2X-1		IC-LI-10X-1	
	500 mL	IC-LI-1X-5		IC-LI-2X-5		IC-LI-10X-5	
Ba (Barium)	100 mL	IC-BA-1X-1		IC-BA-2X-1		IC-BA-10X-1	
	500 mL	IC-BA-1X-5		IC-BA-2X-5		IC-BA-10X-5	
Sr (Strontium)	100 mL	IC-SR-1X-1		IC-SR-2X-1		IC-SR-10X-1	
	500 mL	IC-SR-1X-5		IC-SR-2X-5		IC-SR-10X-5	
Sets	8 x 100 mL	IC-CAT-1X-1-SET		IC-CAT-2X-1-SET		IC-CAT-10X-1-SET	
Above Listed	8 x 500 mL	IC-CAT-1X-5-SET		IC-CAT-2X-5-SET		IC-CAT-10X-5-SET	

† 1,000 µg/mL as Ammonium (NH₄) Other Nitrogen species equivalents are:

NH₃ (Ammonia) = 944 µg/mL
N (Nitrogen) = 776 µg/mL

Ion Chrom - Cation Mixes

Cation Mix #1

IC-MCA-01-1	100 mL
Dilute HNO ₃	6 comps.
Ca (Calcium)	1000 µg/mL
NH ₄ (Ammonium)	400 µg/mL
Mg (Magnesium)	200 µg/mL
K (Potassium)	200 µg/mL
Na (Sodium)	200 µg/mL
Li (Lithium)	50 µg/mL

Cation Mix #3

IC-MCA-03-1	100 mL
Dilute HNO ₃	4 comps.
Ca (Calcium)	100 µg/mL
K (Potassium)	100 µg/mL
Na (Sodium)	50 µg/mL
Li (Lithium)	10 µg/mL

Cation Mix #5

IC-MCA-05-1	100 mL
Dilute HNO ₃	4 comps.
NH ₄ (Ammonium)	3 µg/mL
K (Potassium)	6 µg/mL
Na (Sodium)	3 µg/mL
Li (Lithium)	0.5 µg/mL

Cation Mix #6

IC-MCA-06-1	100 mL
Dilute HNO ₃	6 comps.
Ca (Calcium)	2 µg/mL
NH ₄ (Ammonium)	1.5 µg/mL
Mg (Magnesium)	2 µg/mL
K (Potassium)	2.5 µg/mL
Na (Sodium)	1.5 µg/mL
Li (Lithium)	0.2 µg/mL

Cation Mix #2

IC-MCA-02-1	100 mL
Dilute HNO ₃	6 comps.
Ca (Calcium)	100 µg/mL
NH ₄ (Ammonium)	100 µg/mL
Mg (Magnesium)	100 µg/mL
K (Potassium)	100 µg/mL
Na (Sodium)	100 µg/mL
Li (Lithium)	100 µg/mL

Cation Mix #4

IC-MCA-04-1	100 mL
Dilute HNO ₃	4 comps.
Ca (Calcium)	400 µg/mL
Mg (Magnesium)	200 µg/mL
Ba (Barium)	1600 µg/mL
Sr (Strontium)	600 µg/mL



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