VWR®
trace analysis

01. NORMATOM® HIGH PURITY ACIDS

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NORMATOM® HIGH PURITY ACIDS

In trace analysis, it's crucial to use an homogenous solution, so samples are usually prepared using a digestion method with a mineral acid. The high purity of these acids is essential to avoid inaccuracy in the final results caused by impurities in these ancillary reagents. NORMATOM® acids have been created to satisfy these exacting purity requirements. Ultrapure products have 63 specifications <20 ppt for the range.

- Very high purity (specifications in ppb and ppt for Ultrapure)
- Produced by sub boiling distillation
- Supplied in special polyethylene bottles
- Delivered with Certificate of Analysis

Description	250 ml	500 ml	1 l	2 l	2,5 l
Acetic acid 99%	-	83876.270	83876.290	-	83876.330
Acetic acid 99% Ultrapure	85030.230	85030.270	-	-	-
Ammonia 20%	-	83870.270	-	-	-
Ammonia 20% Ultrapure	85031.230	85031.270	-	-	-
Ammonia 25%	-	85693.270	85693.290	-	85693.320
Hydrobromic acid 47% Ultrapure	-	85032.270	-	-	-
Hydrochloric acid 34%	-	83871.270	83871.290		83871.330
Hydrochloric acid 32% Ultrapure	83878.230	83878.270	83878.290	83878.300	-
Hydrochloric acid 30%	-		85493.290		
Hydrofluoric acid 47%	-	83873.260	-	-	-
Hydrofluoric acid 47% Ultrapure	85029.230	85029.270	85029.290	-	-
Hydrogen peroxide 30% Ultrapure	-	85040.270		-	-
Nitric acid 67%	-	83872.270	83872.290	-	83872.330
Nitric acid 67% Ultrapure	83879.230	83879.270	83879.290	83879.300	
Perchloric acid 67%*	-	83874.260	-	-	83874.320
Perchloric acid 65-71% Ultrapure	85822.230	85822.270	85822.290	85822.300	-
Sulphuric acid 93%	-	83875.270	83875.290	-	83875.330
Sulphuric acid 93% Ultrapure	85028.230	85028.270	85028.290	-	-
Water for trace analysis	-	83877.260	83877.290	-	-

*Product delivered in glass bottle.

ARISTAR® ICP, ICP-MS AND IC SINGLE-ELEMENT STANDARDS

- Produced from high purity acids, water ASTM I 18 MΩ and 99,999% high purity salts
- Solution assayed by titration
- Final concentration verified against ICP standards from NIST
- Total maximum uncertainty: ±1%
- Delivered with Certificate of Analysis
- Produced by an accredited ISO 17034 supplier
- All standards have a 1000 mg/l concentration except ICP-MS standards which are also available in 10 mg/l

Standards for		ICP-MS
Concentration (ppm)		10
Element	Composition	Cat. No.
Pk (ml)		100
Aluminium	$(Al(NO_3)_3.9H_2O$ in HNO_3 2-5%	85548.180
Antimony	Sb in HNO_3 2-5%	85595.180
Arsenic	As in HNO_3 2-5%	85549.180
Barium	$BaCO_3$ in HNO_3 2-5%	85552.180
Beryllium	$BeO(C_2H_3O_2)6$ in HNO_3 2-5%	85553.180
Bismuth	Bi in HNO_3 2-5%	85554.180
Boron	$(NH_4)_2B_4O_7$ in H_2O	85551.180
Cadmium	Cd in HNO_3 2-5%	85556.180

Standards for		ICP				ICP-MS
Concentration (ppm)		1000		10.000		1000
Element	Composition	Cat. No.				
		Pk 100 (ml)	Pk 500 (ml)	Pk 100 (ml)	Pk 500 (ml)	Pk 100 (ml)
Aluminium	$(Al(NO_3)_3.9H_2O$ in HNO_3 2-5%	455002C	455004E	455012E	455014G	457202A
Antimony	Sb in HNO_3 2-5%	455022G	455024Y	-	455034K	456632H
Arsenic	As in HNO_3 2-5%	455042K	455044M	455052M	455054X	456892C
Barium	$(Ba(NO_3)_2$ in HNO_3 2-5%	455062X	455064Q	455072Q	455074S	456652L
Beryllium	$BeO(C_2H_3O_2)_6$ in HNO_3 2-5%	455082S	455084U	455092U	455094W	456662N
Bismuth	Bi in HNO_3 2-5%	455102F	455104H	455112H	455114J	456672P
Boron	H_3BO_3 in H_2O and NH_4OH traces	455122J	455124L	455132L	455134N	457213B
Cadmium	Cd in HNO_3 2-5%	455142N	455144P	455152P	455154R	456682R

Standards for		ICP-MS
Concentration (ppm)		10
Element	Composition	Cat. No.
Pk (ml)		100
Calcium	$CaCO_3$ in HNO_3 2-5%	85555.180
Cerium	$Ce(NO_3)_3$ in 2% HNO_3	85557.180
Caesium	$CsNO_3$ in HNO_3 2-5%	85560.180
Chromium	$Cr(NO_3)_3$ in 2% HNO_3	85559.180
Cobalt	Co in HNO_3 2-5%	85558.180
Copper	Cu in HNO_3 2-5%	85561.180
Dysprosium	Dy_2O_3 in HNO_3 2-5%	85562.180
Erbium	Er_2O_3 in HNO_3 2-5%	85563.180
Europium	Eu_2O_3 in HNO_3 2-5%	85564.180
Gadolinium	Gd_2O_3 in HNO_3 2-5%	85567.180
Gallium	Ga in HNO_3 2-5%	85566.180
Germanium	Ge in 2% HNO_3 / 0,2% HF	85568.180
Gold	Au in HCl 10%	85550.180
Hafnium	HfO_2 in HNO_3 2-5%, HF traces	85569.180
Holmium	Ho_2O_3 in HNO_3 2-5%	85571.180
Indium	In in HNO_3 2-5%	85572.180
Iridium	$IrCl_3.3H_2O$ in HCl 10%	85573.180
Iron	Fe in HNO_3 2-5%	85565.180
Lanthanum	La_2O_3 in HNO_3 2-5%	85575.180
Lead	$Pb(NO_3)_2$ in HNO_3 2-5%	85586.180
Lithium	Li_2CO_3 in HNO_3 2-5%	85576.180
Lutetium	Lu_2O_3 in HNO_3 2-5%	85577.180
Magnesium	$Mg(NO_3)_2$ in HNO_3 2-5%	85578.180
Manganese	$Mn(NO_3)_2$ in HNO_3 2-5%	85579.180
Mercury	HgO in 2% HNO_3	85570.180
Molybdenum	$(NH_4)_2M_oO_4$ in H_2O	85580.180
Neodymium	Nd_2O_3 in HNO_3 2-5%	85583.180
Nickel	$Ni(NO_3)_2$ in HNO_3 2-5%	85584.180
Niobium	Nb in 2% HNO_3 / 0,5% HF traces	85582.180
Palladium	Pd in 2% HNO_3	85587.180
Phosphorus	P in H_2O	85585.180
Platinium	Pt in HCl 2%	85589.180
Potassium	KNO_3 in HNO_3 2-5%	85574.180
Praseodymium	Pr_6O_{11} in HNO_3 2-5%	85588.180
Rhenium	Re in H_2O, HNO_3 traces	85591.180
Rhodium	$RhCl_3$ in HCl 2%	85592.180
Rubidium	$RbNO_3$ in HNO_3 2-5%	85590.180
Ruthenium	$RuCl_3.3H_20$ in HCl 2%	85593.180
Samarium	Sm_2O_3 in HNO_3 2%	85599.180
Scandium	$Sc(NO_3)_3$ in HNO_3 2%	85596.180
Selenium	Se in HNO_3 2%	85597.180
Silicon	$(NH_4)_2SiF_6$ in H_20, HF traces	85598.180
Silver	Ag in HNO_3 2%	85547.180
Sodium	$NaNO_3$ in HNO_3 2%	85581.180
Strontium	$SrCO_3$ in HNO_3 2%	85631.180
Sulphur	$(NH_4)_2SO_4$ in H_2O	85594.180
Tantalum	Ta in 2% HNO_3 / 0,5% HF	85632.180
Tellurium	Te in HNO_3 2%	85634.180
Terbium	$Tb(NO_3)_3$ in HNO_3 2%	85633.180
Thallium	$TlNO_3$ in HNO_3 2%	85639.180
Thullium	Tm_2O_3 in HNO_3 2%	85640.180
Tin	Sn in 1% HNO_3 / 0,5% HF	85630.180
Titanium	Ti in H_2O, HF traces	85636.180
Uranium	$UO_2(OOCCH_3)_2$ in HNO_3 2%	85641.180
Vanadium	NH_4VO_3 HNO_3 2%	85643.180
Ytterbium	Yb_2O_3 in HNO_3 2%	85647.180
Yttrium	Y_2O_3 in HNO_3 2%	85646.180
Zinc	Zn in HNO_3 2%	85648.180
Zirconium	$ZrO(NO_3)_2$ in HNO_3 2%	85649.180
Tungsten	W in H_2O, NH_4OH traces	85644.180

Standards for		ICP				ICP-MS
Concentration (ppm)		1000		10.000		1000
Element	Composition	Cat. No.				
		Pk 100 (ml)	Pk 500 (ml)	Pk 100 (ml)	Pk 500 (ml)	Pk 100 (ml)
Calcium	$CaCO_3$ in HNO_3 2-5%	455162R	455164T	455172T	455174V	456692T
Cerium	$(NH_4)_2Ce(NO_3)_6$ in HNO_3 2-5%	455182V	455184A	455192A	455194C	457224C
	$Ce(NO_3)_3$ in 2% HNO_3	-	-	-	-	-
Caesium	$CsNO_3$ in HNO_3 2-5%	455202Y	455204K	455212K	455214M	457235D
Chromium	$(NH_4)_2Cr_2O_7$ in HNO_3 2-5%	455222M	455224X	455232X	455234Q	456702E
	$(NH_4)_2Cr_2O_7$ in HCl 5%	455242Q	455244S	455252S	455254U	-
Cobalt	Co in HNO_3 2-5%	455262U	455264W	455272W	455274B	457062W
Copper	Cu in HNO_3 2-5%	455282B	455284D	455292D	455294F	456722Y
Dysprosium	Dy_2O_3 in HNO_3 2-5%	455302L	455304N	455212N	455214P	457246F
Erbium	Er_2O_3 in HNO_3 2-5%	455322P	455324R	455332R	455334T	457257G
Europium	Eu_2O_3 in HNO_3 2-5%	455342T	455344V	455352V	455354A	457268H
Gadolinium	Gd_2O_3 in HNO_3 2-5%	455362A	455364C	455372C	455374E	457279J
Gallium	Ga in HNO_3 2-5%	455382E	455384G	455392G	-	457281A
Germanium	$(NH_4)_2GeF_6$ in H_2O, HF traces	455402X	455404Q	455412Q	-	456732K
Gold	Au in HCl 10%	455422S	455424U	455432U	455434W	456742M
Hafnium	HfO_2 in HNO_3 2-5%, HF traces	455442W	455444B	455452B	455454D	457292B
Holmium	Ho_2O_3 in HNO_3 2-5%	455462D	455464F	455472F	455474H	457303C
Indium	In in HNO_3 2-5%	455482H	455484J	455492J	455494L	456752X
Iridium	$IrCl_3.3H_2O$ in HCl 10%	455502R	455504T	455512T	-	457314D
Iron	Fe in HNO_3 2-5%	455522V	455524A	455532A	455534C	456762Q
Lanthanum	La_2O_3 in HNO_3 2-5%	455542C	455544E	455552E	455554G	457325E
Lead	$Pb(NO_3)_2$ in HNO_3 2-5%	455562G	455564Y	455572Y	455574K	456772S
Lithium	Li_2CO_3 in HNO_3 2-5%	455582K	455584M	455592M	455594X	456782U
Lutetium	Lu_2O_3 in HNO_3 2-5%	455602U	455604W	455612W	455614B	457336F
Magnesium	Mg in HNO_3 2-5%	455622B	455624D	455632D	455634F	456792W
Manganese	Mn in HNO_3 2-5%	455642F	455644H	455652H	455654J	456802H
Mercury	Hg in HNO_3 10%	455662J	455664L	455672L	455674N	456812J
Molybdenum	$(NH_4)_2M_oO_4$ in HNO_3, HF traces	455682N	455684P	455692P	-	457347G
Neodymium	Nd_2O_3 in HNO_3 2-5%	455702A	455704C	455712C	455714E	457358H
Nickel	Ni in HNO_3 2-5%	455722E	455724G	455732G	455734Y	456832N
Niobium	Nb_2O_5 in H_2O, HF traces	455742Y	455744K	455752K	-	457369J
Palladium	Pd in HCl 10%	455762M	455764X	455772X	-	457371K
Phosphorus	P in H_2O	455782Q	455784S	455792S	455794U	456842P
Platinium	Pt in HCl 10%	455802D	455804F	458812F	-	457382L
Potassium	KNO_3 in HNO_3 2-5%	455822H	455824J	455832J	455834L	456852R
Praseodymium	Pr_6O_{11} in HNO_3 2-5%	455842L	455844N	455852N	-	457393M
Rhenium	Re in H_2O, HNO_3 traces	455862P	455864R	455872R	-	457404N
Rhodium	Rh in HCl 10%	455882T	455884V	455892V	-	456862T
Rubidium	$RbNO_3$ in HNO_3 2-5%	455902G	455904Y	455912Y	-	457415P
Ruthenium	$RuCl_3.3H_20$ in HCl 10%	455922K	455924M	455932M	-	457426Q
Samarium	Sm_2O_3 in HNO_3 2-5%	455942X	455944Q	455952Q	455954S	457437R
Scandium	Sc in HNO_3 2-5%	455962S	455964U	455972U	455974W	456872V
Selenium	Se in HNO_3 2-5%	455982W	455984B	455992B	455994D	456882A
Silicon	$(NH_4)_2SiF_6$ in H_20, HF traces	456002G	456004Y	456012Y	456014K	457448S
Silver	Ag in HNO_3 2-5%	456022K	456024M	456032M	-	456892C
Sodium	$NaNO_3$ in HNO_3 2-5%	456042X	456044Q	456052Q	456054S	456902K
Strontium	Sr in HNO_3 2-5%	456062S	-	456072U	456074W	456912M
Sulphur	$(NH_4)_2SO_4$ in H_2O	456082W	456084B	456092B	456094D	456922X
Tantalum	Ta in H_2O,HF traces	456102J	456104L	456112L	456114N	457459V
Tellurium	Te in HCl 20%	456122N	456124P	456132P	-	457461A
Terbium	Tb_4O_7 in HNO_3 2-5%	456142R	456144T	456152T	456154V	456932Q
Thallium	Tl in HNO_3 2-5%	456162V	456164A	456172A	456174C	456942S
Tin	Sn in HNO_3 2-5%, HF traces	456222Q	456224S	456232S	-	-
	Sn in HCl 20%	456242U	456244W	456252W	456254B	456952U
Titanium	Ti in H_2O, HF traces	456262B	456264D	456272D	456274F	456962W
Vanadium	V_2O_5 in HNO_3 2-5%	456322T	456324V	456332V	456334A	456972B
Ytterbium	Yb_2O_3 in HNO_3 2-5%	456342A	456344C	456352C	456354E	457472B
Yttrium	Y in HNO_3 2-5%	456362E	456364G	456372G	456374Y	456982D
Zinc	Zn in HNO_3 2-5%	456382Y	456384K	456392K	456394M	456992F
Zirconium	$ZrO(NO_3)_2$ in HNO_3 2-5%	456402S	456404U	456412U	456414W	457483C
Tungsten	W in H_2O, NH_4OH traces	457182G	457184Y	457172E	457174G	457494D

ION CHROMATOGRAPHY STANDARDS SINGLE AND MULTI-ELEMENT SOLUTIONS

- Traceable to NIST
- Manufactured by an accredited ISO 17034 supplier
- Supplied with certificate of analysis

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To discover all our products for metal trace analysis detection, see our Landing page on metal trace analysis detection: **https://uk.vwr.com/cms/metal_trace_analysisdetection**

Concentration (ppm)	1000	
Description	Cat. No.	
	Pk 100 (ml)	Pk 500 (ml)
Acetate	84951.180	-
Ammonium	84952.180	84952.260
Ammonium (in N)	84953.180	84953.260
Barium	84954.180	-
Benzoate	84955.180	-
Bromate	84956.180	-
Bromide	84957.180	84957.260
Calcium	84958.180	-
Cesium	84959.180	-
Chlorate	84960.180	-
Chlorite 1000 mg/l in NaOH solution	84961.180	-
Chloride	84962.180	84962.260
Chromate (in Cr VI)	84963.180	-
Citrate water	84965.180	-
Fluoride	84966.180	84966.260
Formate	84967.180	-
Glycolate	84968.180	-
Hydrogenophthalate	84969.180	-
Hydrogenosulphite	84970.180	-
Iodate	84971.180	-
Iodide	84972.180	84972.260
Lactate	84973.180	-
Lithium	84974.180	-
Magnesium	84975.180	84975.260
Maleate	84976.180	-
Methane sulphonate	84977.180	-

Concentration (ppm)	1000	
Description	Cat. No.	
	Pk 100 (ml)	Pk 500 (ml)
3-Methoxypropylamine	84978.180	-
Monoethanolamine	84979.180	-
Monomethylamine	84980.180	-
Nitrate	84981.180	84981.260
Nitrate (in N)	84982.180	84982.260
Nitrilotriacetate	84983.180	-
Nitrite	84984.180	84984.260
Nitrite (in N)	84985.180	84985.260
Oxalate	84986.180	-
Perchlorate	84987.180	-
Phosphate	84988.180	84988.260
Phosphate (in P)	84989.180	84989.260
Potassium	84990.180	84990.260
Propionate	84991.180	-
Silicate	84992.180	-
Sodium	84993.180	84993.260
Strontium	84994.180	-
Succinate	84995.180	-
Sulphate	84996.180	84996.260
Sulphite (in HSO_3^-)	84997.180	84997.260
Tartrate	84998.180	-
Thiocyanate	84999.180	-
Thiosulphate 1000 mg/l in amylic alcohol	85000.180	-
Triethanolamine	85001.180	-
Triethylamine	85002.180	-
Trimetylamine	85003.180	-

Multi-element standards, anionic	Matrix	Pk (ml)	Cat. No.
Anion multi-element standard I	Water	500 ML	87037.260
Anion multi-element standard II	Water	500 ML	87038.260
IC multi-element standard I	Water	500 ML	87039.260
IC multi-element standard V	Water	100 ML	87040.180
Multi-element standards, cationic			
IC multi-element standard VII, acc to EN ISO 14911	0.001 mol/l HNO_3	100 ML	87041.180
IC multi-element standard VII, acc to EN ISO 14911	0.01 mol/l HNO_3	100 ML	87042.180

ARISTAR® ICP AND ICP-MS MULTI-ELEMENT STANDARDS

Multi-element standards are directly traceable to NIST. A Certificate of Analysis is delivered with each product including exact data on content, composition, traceability, date of release and minimum shelf life.

Description	Elements	Cat. No.
ICP multi-element solution according USP 232 Dietary supplements	4 elements: Cd 5 mg/l, Pb 10 mg/l, as 15 mg/l, Hg 15 mg/l in HNO_3 7%	85035.180
ICP multi-element solution according USP 232 Oral dose	8 elements: Cd 25 mg/l, Pb 5 mg/l, as 1,5 mg/l, Hg 15 mg/l, Mo 100 mg/l, Ni 500 mg/l, V 100 mg/l, Cu 1000 mg/l in HNO_3 7%	85036.180
ICP multi-element solution diluted according USP 232 Oral dose	8 elements: Cd 2,5 mg/l, Pb 5 mg/l, as 1,5 mg/l, Hg 1,5 mg/l, Mo 10 mg/l, Ni 50 mg/l, V 10 mg/l, Cu 100 mg/l in HNO_3 7%	85037.180
ICP multi-element solution according USP 232 Parental dose	6 elements: 100 mg/l each of Ir; Pt; Os; Rh; Pd; Ru in HCl 15%	85038.180
ICP multi-element solution according USP 232 Parental dose	6 elements: 10 mg/l each of Ir; Pt; Os; Rh; Pd; Ru in HCl 15%	85039.180

Description	Elements	Pk (ml)	Cat. No.
ICP-MS, multi-element calibration standard 2 ARISTAR®	29 elements: 10 mg/l: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, P, Rb, Se, Sr, Tl, U, V, ZN in HNO_5 5%	100	**456502V**
ICP-MS, multi-element calibration standard 4 ARISTAR®	12 elements: 10 mg/l: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr in H_2O, HF traces	100	**456522C**
ICP-MS, tuning solution 1 ARISTAR®	8 elements: 100 mg/l: Ba, Be, Cu, In, Li, Mg, Tl, U in HNO_3 2%	100	**456532E**
ICP-MS, tuning solution 2 ARISTAR®	13 elements: 100 mg/l: Ba, Be, Bi, Ce, Cu, Ho, In, Li, Mg, Pb, Tl, U, Y in HNO_3 2%	100	**456542G**
ICP-MS, interference check 1 ARISTAR®	12 elements: Cl 18000 mg/l: Al, K, Mg, P, S 1000 mg/l, C 2000 mg/l, Ca 3000 mg/l, Fe, Na 2500 mg/l, Mo, Ti 20 mg/l in HNO_3 1%	100	**456552Y**
ICP-MS, interference check 2 ARISTAR®	11 elements: Ag, C, Cr, Cu, Mn, Ni, V @ 20 mg/l, As, Cd, Se, Zn @ 10 mg/l	100	**456562K**
ICP-MS, multi-element quality control standard 1 ARISTAR®	9 elements: 10 mg/l: Be, Bi, Ce, Co, In, Pb, Mg, Ni, U in HNO_3 2%	100	**456592Q**
ICP-MS, multi-element quality control standard 2 ARISTAR®	25 elements: 10 mg/l: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn in HNO_3 5%	100	**456602B**
ICP-MS, multi-element calibration standard 1 ARISTAR®	17 elements: 10 mg/l: Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb in HNO_3 5%	100	**456622F**
ICP-MS multi-element quality control standard	36 elements: 10 mg/l: Al, Ag, As, B, Ba, Ca, Cd, Ce, Co, Cr, Cu, Dy, Er, Eu, Fe, Gd, Ho, K, La, Li, Lu, Mg, Mn, Na, Nd, Ni, P, Pb, Rb, Se, Sm, Sr, Tl, Tm, V, Zn	100	**84793.180**
ICP-MS multi-element quality control standard	12 elements: 10 mg/l: Hf, Ge, Mo, Nb, Sb, Si, Sn, Ta, Te, Ti, W, Zr	100	**84794.180**
Checking solution for ICP-MS	9 elements: 100 mg/l: Be, I, Bi, Li, Cr, Mg, Co, Pb, U	250	**88175.230**
ICP multi-element quality control standard 1 ARISTAR®	23 elements: 100 mg/l: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn in HNO_3 5%, HF traces	100	**456422W**
ICP multi-element quality control standard 1 ARISTAR®	23 elements: 100 mg/l: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn in HNO_3 5%, HF traces	500	**456424B**
ICP multi-element quality control standard 2 ARISTAR®	7 elements: Ag 50 mg/l, Al, B, Ba, Na @ 100 mg/l, K @ 1000 mg/l, Si 500 mg/l in HNO_3 5%, HF traces	100	**456432B**
ICP multi-element quality control standard 2 ARISTAR®	7 elements: Ag 50 mg/l, Al, B, Ba, Na @ 100 mg/l, K @ 1000 mg/l, Si 500 mg/l in HNO_3 5%, HF traces	500	**456434D**
ICP multi-element quality control standard 3 ARISTAR®	15 elements: 100 mg/l: Al, Ba, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Na, Ti, Zn in HNO_3 5%	100	**456442D**
ICP multi-element quality control standard 3 ARISTAR®	15 elements: 100 mg/l: Al, Ba, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Na, Ti, Zn in HNO_3 5%	500	**456444F**
ICP multi-element calibration standard 1 ARISTAR®	19 elements: Ag, Ni 50 mg/l, Al 100 mg/l, B, Fe 15 mg/l, Ba, Mn 5 mg/l, Be, Sr 1 mg/l, Bi, In, Pb 200 mg/l, Cd, Co, Cu, Zn 20 mg/l, Cr 25 mg/l, Ga 150 mg/l, Tl 40 mg/l in HNO_3 5%	100	**456452F**
ICP multi-element calibration standard 2 ARISTAR®	3 elements: K 10000 mg/l, Li 250 mg/l, Na 1000 mg/l in HNO_3 2%	100	**456462H**
ICP multi-element calibration standard 3 ARISTAR®	4 elements: 1000 mg/l: Ba, Ca, Mg, Sr in HNO_3 2%	100	**456472J**

Description	Elements	Pk (ml)	Cat. No.
ICP multi-element quality control standard	28 elements: 1 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn in HNO_3 2%	100	**05200.185**
ICP multi-element quality control standard	28 elements: 100 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn in HNO_3 2%	100	**85006.186**
ICP multi-element quality control standard	21 elements: 1000 mg/l: Ag, As, Al, B, Ba, Bi, Cd, Co, Cr, Cu, Fe, Ga, In, Li, Mn, Ni, Pb, Sr, Tl, Zn, Si in HNO_3 4%	100	**87629.180**
ICP multi-element quality control standard	22 elements: 10 mg/l: As, Ba, Be, Cd, Co, Cr, Cu, Fe, Al, Mn, Mo, Ni, Pb, Sb, Se, Sn, Ti, Tl, V, U, Te, Zn in HNO_3 5%	50	**88724.150**
ICP multi-element quality control standard	21 elements: 100 mg/l: Al, As, B, Ca, Cd, Cr, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, P, Ti, Zn, Si, S in HNO_3 5%	100	**89166.180**
ICP multi-element quality control standard	32 elements: 100 mg/l: Ag, Al, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Ge, In, K, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Re, Sb, Si, Sn, Ta, Ti, V, W, Zn in HNO_3 5%	100	**89186.180**
ICP multi-element quality control standard	23 elements: 100mg/l: As, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn in HNO_3 5%	100	**84790.180**
ICP multi-element quality control standard	33 elements: 100 mg/l: Al, Ag, As, B, Ba, Be, Bi, Ca, Cd, Cs, Co, Cr, Cu, Fe, In, K, Li, Mg, Mn, Mo, Na, Ni, Nb, Pb, Rb, Sb, Se, Sr, Ti, Tl, V, U, Zn in HNO_3 5%	100	**84791.180**
	9 elements: 100 mg/l: Au, Ir, Os, Pd, Pt, Rh, Ru, Sn, Te in HCl 10%	100	**84792.180**
ICP multi-element quality control standard	ICP nitric acid calibration blank ARISTAR®: HNO_3 5% in H_20	500	**456484N**
ICP multi-element quality control standard	23 elements: 1000 mg/l: Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Tl, Zn in HNO_3 5%	100	**85025.180**
ICP MS multi-element quality control standard	30 elements: 1000 mg/l: As, B, Be, Fe, Se, Zn @ 100 mg/l, Ba, Bi, Cd, Co, Cr, Cu, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Sr, Te, Ti, U, V @ 10 mg/l, Ca in HNO_3 2%	100	**85026.180**
ICP multi-element standard solution XIII	15 elements: Al 50 mg/l; V 25 mg/l; As 10 mg/l; Be 10 mg/l; Co 10 mg/l; Cr 10 mg/l; Cu 10 mg/l; Fe 100 mg/l; Mn 100 mg/l; Ni 100 mg/l; Pb 100 mg/l; Zn 100 mg/l; Cd 25 mg/l; Se 25 mg/l; Hg 5 mg/l in HNO_3 5%	100	**87045.180**
ICP multi-element standard solution XI	7 elements: Cd 10 mg/l; Cr 900 mg/l; Cu 800 mg/l; Ni 200 mg/l; Pb 900 mg/l; Zn 2500 mg/l; Hg 8 mg/l in HNO_3 5%	100	**87046.180**
ICP multi-element standard solution VIII	24 elements: 100 mg/l each of Al; B; Ba; Be; Bi; C; Cd; Co; Cr; Cu; Fe; Ga; K; Li; Mg; Mn; Na; Ni; Pb; Se; Sr; Te; Tl; Zn in HNO_3 2%	100	**87047.180**
ICP multi-element standard solution X	23 elements: As 50 ug/l; B 100u g/l; Ba 50 ug/l; Be 20 ug/l; Bi 10 ug/l; Ca 35000 ug/l; Cd 20 ug/l; Co 25 ug/l; Cr 20 ug/l; Cu 20 ug/l; Fe 100 ug/l; K 3000 ug/l; Mg 15000 ug/l; Mn 30 ug/l; Mo 100 ug/l; Na 8000 ug/l; Ni 50 ug/l; Pb 25 ug/l; Se 10 ug/l; Sr 100 ug/l; Tl 10 ug /l; V 50 ug/l; Zn 50 ug/l in HNO_3 5%	100	**87044.180**
ICP multi-element standard solution IX	100 mg/l each of As; Be; Pb; Cd; Cr; Ni; Hg; Se; Tl	100	**87048.180**
ICP multi-element standard solution XVII	7 elements: 100mg/l each of Hf; Ir; Sb; Sn; Ta; Ti; Zr in HCl 15%/tr HF and HNO_3	100	**87049.18**

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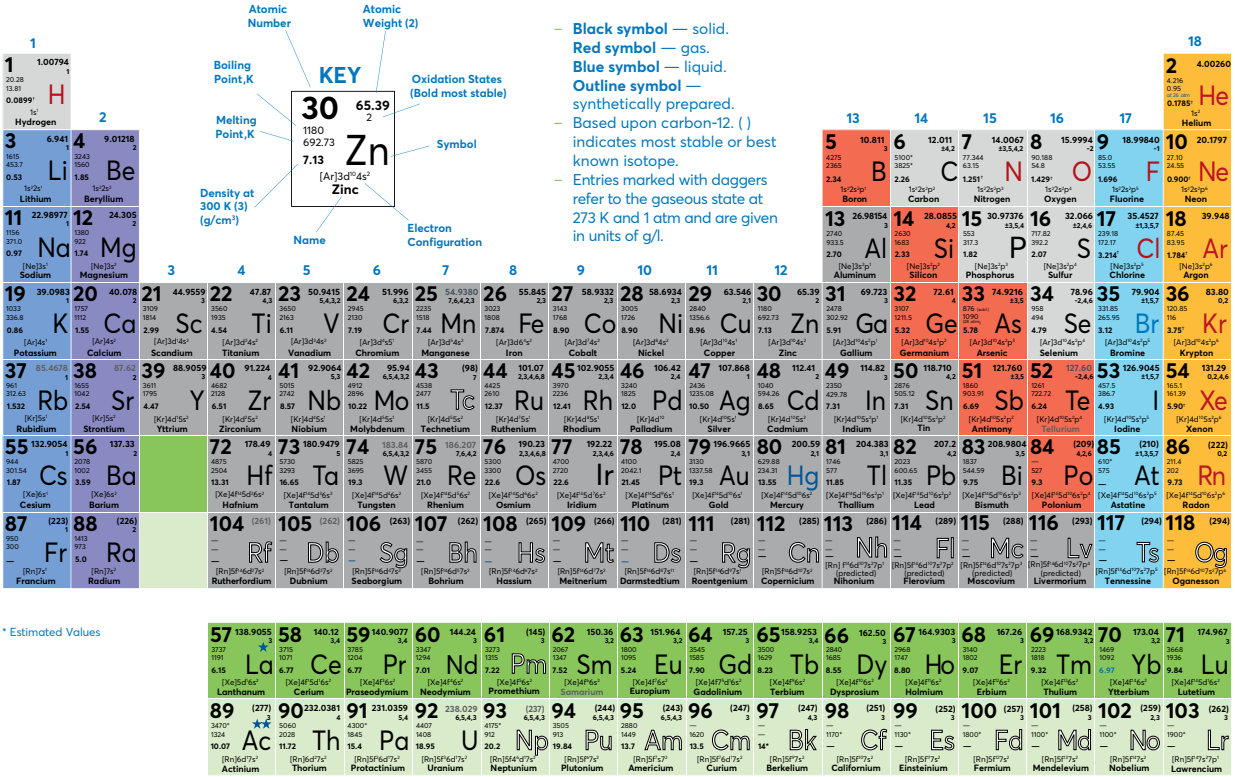

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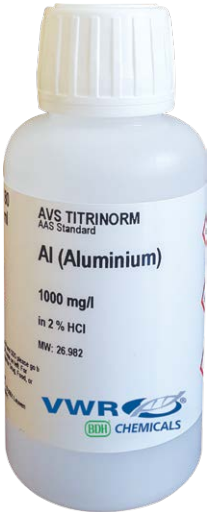

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Element	AAS grade matrix	Cat. No. 100 ml	Cat. No. 500 ml
Ag	2% HNO_3	86659.180	86659.260
Al	2% HCl	86660.180	86660.260
As	2% HNO_3	86661.180	86661.260
Au	2% HCl	86662.180	86662.260
B	Water	86663.180	86663.260
Ba	2% HNO_3	86664.180	86664.260
Be	2% HCl	86665.180	86665.260
Bi	10% HNO_3	86666.180	86666.260
Ca	2% HNO_3	86667.180	86667.260
Cd	2% HNO_3	86668.180	86668.260
Ce	2% HNO_3	86669.180	86669.260
Co	2% HNO_3	86670.180	86670.260
Cr	2% HNO_3	86671.180	86671.260
Cs	2% HNO_3	86672.180	86672.260
Cu	2% HNO_3	86673.180	86673.260
Dy	2% HNO_3	86674.180	86674.260
Er	2% HNO_3	86675.180	86675.260
Eu	2% HNO_3	86676.180	86676.260
Fe	2% HCl	86677.180	86677.260
Ga	2% HNO_3	86678.180	86678.260
Gd	2% HNO_3	86679.180	86679.260
Ge	5% HNO_3 / 1% HF	86680.180	86680.260
Hf	2% HNO_3 / 1% HF	86681.180	86681.260
Hg	10% HNO_3	86682.180	86682.260
Ho	2% HNO_3	86683.180	86683.260
In	2% HNO_3	86684.180	86684.260
Ir	10% HCl	86685.180	86685.260
K	2% HNO_3	86686.180	86686.260
La	2% HNO_3	86687.180	86687.260
Li	2% HNO_3	86688.180	86688.260
Lu	2% HNO_3	86689.180	86689.260
Mg	2% HNO_3	86690.180	86690.260
Mn	2% HNO_3	86691.180	86691.260

Element	AAS grade matrix	Cat. No. 100 ml	Cat. No. 500 ml
Mo	Water	86692.180	86692.260
Na	2% HNO_3	86693.180	86693.260
Nb	5% HNO_3 / 1% HF	86694.180	86694.260
Nd	2% HNO_3	86695.180	86695.260
Ni	2% HNO_3	86696.180	86696.260
Os	5% HCl	86697.180	86697.260
P	Water	86698.180	86698.260
Pb	2% HNO_3	86699.180	86699.260
Pd	5% HCl	86700.180	86700.260
Pt	10% HCl	86701.180	86701.260
Rb	2% HNO_3	86702.180	86702.260
Rh	2% HNO_3	86703.180	86703.260
Rh	5% HCl	86704.180	86704.260
Ru	5% HCl	86705.180	86705.260
S	Water	86706.180	86706.260
Sb	5% HNO_3 / 1% HF	86707.180	86707.260
Sc	2% HNO_3	86708.180	86708.260
Se	2% HNO_3	86709.180	86709.260
Si	Water	86710.180	86710.260
Sa	2% HNO_3	86711.180	86711.260
Sn	20% HCl	86712.180	86712.260
Sr	2% HNO_3	86713.180	86713.260
Ta	5% HNO_3 / 1% HF	86714.180	86714.260
Te	10% HNO_3	86715.180	86715.260
Ti	5% HNO_3 / 0,5% HF	86717.180	86717.260
Tl	2% HNO_3	86718.180	86718.260
Tm	2% HNO_3	86719.180	86719.260
V	2% H_2SO_4	86721.180	86721.260
W	1% HNO_3 / 1% HF	86722.180	86722.260
Y	2% HNO_3	86723.180	86723.260
Yb	2% HNO_3	86724.180	86724.260
Zn	-	86725.180	86725.260
Zr	5% HCl / 0,5% HF	86726.180	86726.260

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