Ultra High Purity Acid & Alkali

Ultrapur™

Ultrapur™

Guaranteed metal impurity content at the level of ppt

Ultrapur™ is the brand name of Ultra High Purity chemical lineup specially designed for precise instrumental trace analysis of metal impurities. The modern analytical instruments, ICP-MS, ICP-AES, the detection limit has advanced from ppb(10^{-9}) to ppt(10^{-12})level. To meet the growing demands for the highest purity of reagents in modern analytical instruments, Ultrapure reagents should have impurity level below 10 ppt.

Undetectable, Minimal Impurity Content

Products are refined with Kanto Chemical's special treatment method for use in the clean room environment. The quantity of each element is at the ppt level at most, which offers the most superior product in purity on the market.

Contamination-free Container

Pproducts are contained in high-quality Teflon (PFA)-coated packaging, avoiding contamination from materials such as glass.

Certificate of Analysis

An assay is available for each product that records the lot-specific analysis obtained by ICP/MS and AAS methods.

Ultrapur™-100

Guaranteed metal impurity content at the level of 100 ppt

Ultra High Purity chemicals lineup specially designed for precise instrumental trace analysis of metal impurities same as Ultrapur™. To solve the increasing demands for highest purity of reagents from modern analytical instruments, Ultrapur™-100 reagents should have their impurity100 ppt level.

High Purity

Ultrapur™-100 products are refined with our special treatment method for use in the clean room environment. The quantity of each element is at the 100 ppt level , which is next to Ultrapur™, which offers the most superior product in purity on the market.

Novel, Unique Bottle

Ultrapur™-100 products are contained in Extremely-pure Polyethylene (HDPE) packaging, avoiding contamination from materials such as glass.

Ultrapur™ Acid / Ultrapure Water Specification

Item		*Ultrapur™ Acid / Ultrapure Water*						
		CH_3COOH	HCl	HNO_3	$HClO_4$	H_2SO_4	H_2O_2	H_2O
Purity	min.	99.0%	-	-	-	96.0%	-	-
Concentration		-	30.0-32.0%	60.0-62.0%	60.0-62.0%	-	30.0-32.0%	-
Silver(Ag)	max.	1	1	1	5	10	1	1
Aluminium(Al)	max.	10	10	10	20	20	10	5
Arsenic(As)	max.	-	5	5	-	-	5	5
Gold(Au)	max.	5	5	5	10	10	5	1
Barium(Ba)	max.	5	5	5	-	-	5	1
Beryllium(Be)	max.	1	1	1	10	10	1	1
Bismuth(Bi)	max.	1	1	1	5	5	1	1
Calcium(Ca)	max.	20	5	5	10	10	10	5
Cadmium(Cd)	max.	5	5	5	10	10	5	5
Cobalt(Co)	max.	5	5	5	10	10	5	1
Chromium(Cr)	max.	5	5	5	20	10	5	1
Copper(Cu)	max.	10	10	10	10	10	10	5
Europium(Eu)	max.	-	1	1	-	-	1	-
Iron(Fe)	max.	10	10	10	20	20	10	5
Gallium(Ga)	max.	-	10	10	10	10	10	-
Germanium(Ge)	max.	-	10	5	10	10	5	5
Mercury(Hg)	max.	-	5	5	-	-	-	5
Indium(In)	max.	10	10	10	10	10	10	-
Potassium(K)	max.	10	5	5	10	10	5	5
Lithium(Li)	max.	1	1	1	1	10	1	1
Magnesium(Mg)	max.	20	5	5	10	10	5	5
Manganese(Mn)	max.	5	5	5	5	5	5	1
Molybdenum(Mo)	max.	-	5	5	10	10	5	1
Sodium(Na)	max.	10	5	5	20	20	5	5
Niobium(Nb)	max.	10	10	10	10	10	10	-
Nickel(Ni)	max.	30	10	10	10	10	10	10
Lead(Pb)	max.	5	5	5	5	5	5	5
Platinum(Pt)	max.	10	10	5	10	10	5	5
Rubidium(Rb)	max.	1	1	1	-	-	1	1
Rhodium(Rh)	max.	-	1	1	-	-	1	-
Aotimony(Sb)	max.	5	5	5	10	10	5	5
Selenium(Se)	max.	-	10	10	-	-	-	10
Tin(Sn)	max.	10	10	5	20	20	5	5
Strontium(Sr)	max.	1	1	1	1	1	1	1
Tantalum(Ta)	max.	10	1	1	10	10	1	1
Thorium(Th)	max.	0.05	0.005	0.005	0.1	0.1	0.005	0.005
Uranium(U)	max.	0.02	0.002	0.002	0.1	0.1	0.002	0.002
Tungsten(W)	max.	-	10	10	-	-	10	10
Yttrium(Y)	max.	10	10	10	10	10	10	-
Zinc(Zn)	max.	10	5	5	10	10	5	5
Zirconium(Zr)	max.	10	10	10	10	10	10	-

Concentration Unit of Metal Specification : ppt

Ultrapur™ Alkali / Ultrapur™-100 Specification

Item		Ultrapur™ Alkali		
		NH_3	KOH	NaOH
Concentration		28-30%	min. 15%	min. 11%
Appearance (Color)	max.		10 Hazen	10 Hazen
Silver(Ag)	max.	0.01	-	-
Aluminium(Al)	max.	0.2	30	20
Arsenic(As)	max.	0.1	3	3
Barium(Ba)	max.	0.01	10	10
Boron(B)	max.	0.5	-	-
Beryllium(Be)	max.	0.01	-	-
Bismuth(Bi)	max.	0.01	-	-
Calcium(Ca)	max.	0.5	2	2
Cadmium(Cd)	max.	0.01	1	1
Cobalt(Co)	max.	0.01	-	-
Chromium(Cr)	max.	0.01	-	-
Copper(Cu)	max.	0.1	3	3
Europium(Eu)	max.	-	-	-
Iron(Fe)	max.	0.5	10	10
Gallium(Ga)	max.	0.01	-	-
Germanium(Ge)	max.	-	-	-
Indium(In)	max.	0.01	-	-
Potassium(K)	max.	0.5	-	-
Lithium(Li)	max.	0.01	-	-
Magnesium(Mg)	max.	0.1	1	1
Manganese(Mn)	max.	0.01	-	-
Sodium(Na)	max.	0.5	-	-
Nickel(Ni)	max.	0.1	-	-
Lead(Pb)	max.	0.1	2	2
Palladium(Pd)	max.	0.01	-	-
Antimony(Sb)	max.	0.1	-	-
Silicon(Si)	max.	1.0	-	-
Tin(Sn)	max.	0.1	-	-
Strontium(Sr)	max.	0.01	1	1
Thorium(Th)	max.	0.01	-	-
Thallium(Tl)	max.	0.1	-	-
Uranium(U)	max.	0.01	-	-
Zinc(Zn)	max.	0.1	15	10

Concentration Unit of Metal Specification : ppb

Item		Ultrapur™-100		
		HCl	HNO_3	H_2SO_4
Concentration		35.0-37.0%	69.0-71.0%	min. 96.0%
Silver(Ag)	max.	100	100	100
Aluminium(Al)	max.	200	200	200
Gold(Au)	max.	100	100	100
Barium(Ba)	max.	100	100	100
Beryllium(Be)	max.	100	100	100
Bismuth(Bi)	max.	100	100	100
Calcium(Ca)	max.	100	100	100
Cadmium(Cd)	max.	100	100	100
Cobalt(Co)	max.	100	100	100
Chromium(Cr)	max.	100	100	100
Copper(Cu)	max.	100	100	100
Iron(Fe)	max.	200	200	200
Gallium(Ga)	max.	100	100	100
Germanium(Ge)	max.	100	100	100
Indium(In)	max.	100	100	100
Potassium(K)	max.	200	200	200
Lithium(Li)	max.	100	100	100
Magnesium(Mg)	max.	100	100	100
Manganese(Mn)	max.	100	100	100
Molybdenum(Mo)	max.	100	100	100
Sodium(Na)	max.	200	200	200
Nickel(Ni)	max.	100	100	100
Lead(Pb)	max.	100	100	100
Antimony(Sb)	max.	100	100	100
Tin(Sn)	max.	100	100	100
Strontium(Sr)	max.	100	100	100
Thorium(Th)	max.	100	100	100
Uranium(U)	max.	100	100	100
Yttrium(Y)	max.	100	100	100
Zinc(Zn)	max.	100	100	100
Zirconium(Zr)	max.	100	100	100

Concentration Unit of Metal Specification : ppb

Product

Name	Grade	Package	Catalog No.
Ultrapur™ series			
Acetic acid	Ultrapur™	250 mL	01021-2B
Hydrochloric acid	Ultrapur™	250 mL	18078-1B
Nitric acid 1.38	Ultrapur™	250 mL	28163-1B
Perchloric acid, 60%	Ultrapur™	250 mL	32059-1B
Sulfuric acid	Ultrapur™	250 mL	37390-1B
Hydrogen peroxide	Ultrapur™	250 mL	18084-2B
Ultrapure water	Ultrapur™	1 L	43001-1B
Ammonia solution	Ultrapur™	250 mL	01266-3B
Potassium hydroxide solution	Ultrapur™	250 mL	32947-1B
Sodium hydroxide solution	Ultrapur™	250 mL	37960-1B
Ultrapur™-100 series			
Hydrochloric acid	Ultrapur™-100	500 mL	18078-4B
Nitric acid 1.42	Ultrapur™-100	500 mL	28163-5B
Sulfuric acid	Ultrapur™-100	500 mL	37390-4B

＜Precautions＞

To protect the quality of Ultrapur™ & Ultrapur™-100, we recommend you

1) Handling all in a clean-box, - bench(-hood), or –room of Class 10 or below.
2) To take out in order of a) Outer container and b) Inner box(Polyethylene bag with zipper)
3) To wear disposable polyethylene gloves and wash it with Ultra pure water.
4) To open carefully not to contaminate inside cap.
5) DO NOT directly insert pipette to inside bottle, sample directly bottle to another bottle.
6) Please immediately cap bottle as soon as using it.
7) Please store cool and dark place with putting bottle in plastic bag and putting it back to box.
8) PAY ATTENTION, Nitrogen Oxide Gas can be permeated though bottle and Acidity Condensation can be appeared on outside of bottle. Please store at cool and dark place with sealed bottle cap.

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