

High-purity acids



J.T.Baker® Brand Acids

Purity and consistency are essential for all reagent chemicals, particularly acids. Whether used for trace-metal analysis or for general use, aligning the correct acid quality to your application is necessary to achieve optimal results. The J.T.Baker® brand has a well-deserved reputation for high-quality acids, beginning with the launch of the ultra-high-purity ULTREX™ acids product line four decades ago. Today, J.T.Baker® acids offer four distinct levels of purity:

- **J.T.BAKER® ULTREX™ II** acids for critical elemental analysis with less than 10 parts-per-trillion (ppt) levels of up to 65 elements
- **J.T.BAKER® BAKER INSTRA-ANALYZED™ Plus** acids for elemental analysis, tested in extremely low ppb range for up to 64 metals
- **J.T.BAKER® BAKER INSTRA-ANALYZED™** acids for elemental analysis, tested in the low ppb range for up to 35 metals
- **J.T.BAKER® BAKER ANALYZED™ ACS** reagent-grade acids that meet or exceed ACS specifications and provide exceptional quality and value

The success of the application, reliability of results, and proper testing of trace metals all depend on the correct quality and grade of acid. The J.T.Baker® line of high-purity acids will meet your needs – even for detection of trace metals at ultra-low, parts-per-trillion levels.



Grade selection made easy

Choosing the appropriate grade of acids is essential to eliminating rework and ensuring application success.

Application	Detection Limit	Instrumentation	Grade
Critical analysis, ultra-low detection	Low ppt (parts per trillion)	Inductively Coupled Plasma (ICP-OES) (ICP-MS), Graphite Furnace (GFAA)	ULTREX™ II acids
Sensitive trace metal analysis, EPA protocols	Very low ppb (parts per billion)	Inductively Coupled Plasma (ICP-OES), Graphite Furnace (GFAA)	BAKER INSTRA-ANALYZED™ Plus acids
Routine trace metal analysis, EPA protocols	Low ppb (parts per billion)	Inductively Coupled Plasma (ICP-OES), Flame Atomic Absorption (FAA), Wet Chemistry	BAKER INSTRA-ANALYZED™ acids

Key applications and industries

Industry	Examples of Sample Types	Methods/Regulations
Environmental and Agriculture	Natural water (rivers, lakes, streams)	US EPA Method 1638 Metals by ICPMS
	Drinking water	Method 200.8 Metals in Drinking Water by ICPMS
	Waste water	EPA Method 1311 Hazardous Waste
	Industrial influents and effluents	EPA Method 6010 Total Metals in Waste Water
	Sludge	SW-846 Methods 3005 - 3051A
	Livestock feed fertilizer	EPA 6010B
	Soil	EPA Method 3050B
	Plant tissue	Total Metals in Soil by ICPMS Method 6020 ISO 11466.2
Food and Beverage	Food additives, raw/in-process and finished products, packaging material	US FDA Elemental Analysis Manual for Food and Related Product
Nutraceutical	Herbal remedies, supplements, medical foods	US FDA Elemental Analysis Manual for Food and Related Product
Pharmaceutical	Drugs, vaccines, vitamins	US Pharmacopeia - National Formulary Standards
Semiconductor and Microelectronics	Fab air	SEMI Guidelines
	Fab chemicals QC	
Clinical, Biological, Medical Devices, Occupation Health and Safety	Tissues (liver, kidney), blood/blood products, urine, dental alloys, implants	CDC Metals in Urine 8310 or Elements in Blood and Tissue 8005 NIOHS



J.T.BAKER® ULTREX™ II ULTRAPURE ACIDS

J.T.Baker® ULTREX™ II grade high-performance acids are recommended for use in your most demanding trace element analyses by ICP-MS, ICP-OES/AES, and Graphite Furnace Atomic Absorption (GFAA).

ULTREX™ II grade acids are analyzed for up to 65 trace elements in the low ppt range with specifications of less than 10 ppt for 50 elements and total element impurities that typically do not exceed 500 ppt.

To ensure product purity, ULTREX™ II grade acids come packaged in inert, pre-leached fluoropolymer bottles under Class 100 environment. An optional bottle-top dispenser, specifically designed for use with ULTREX™ II acids, may also be used to further reduce the risk of contamination.

ULTREX™ II Acids Products

Description	Size	Avantor Part Number
Acetic Acids, Glacial	500 mL	JT6903-5
Ammonium Hydroxide, 20%	490 mL (P)	JT4807-5
	500 mL	JT6900-5
Hydrochloric Acid	2 L	JT6900-2
Hydrofluoric Acid	500 mL	JT6904-5
Hydrogen Peroxide, 30%	450 mL (P)	JT5155-1
	500 mL	JT6901-5
	1 L	JT6901-1
Nitric Acid	2 L	JT6901-2
Perchloric Acid, 70%	500 mL	JT4806-1
Phosphoric Acid	50 g (P)	JT6908-4
Sulfuric Acid	500 mL	JT6902-5
Water	1 L (P)	JT6906-2

(P) = Polyethylene bottle

ULTREX™ II Acids Dispensing System

Description	Avantor Part Number
ULTREX™ Acids Bottle Top Dispenser	JT6910-1



J.T.BAKER® BAKER INSTRA-ANALYZED™ PLUS ACIDS

The J.T.Baker® BAKER INSTRA-ANALYZED™ Plus line of acids is recommended for use in ICP-OES/AES and GFAA applications, and other applications requiring parts-per-billion (ppb) trace metal testing.

Packaged in space-saving and environmentally friendly HDPE bottles, BAKER INSTRA-ANALYZED™ Plus acids have testing of more trace metals with tighter specifications on existing trace metals. The products have been quality tested for up to 64 trace metals tested to very low ppb levels.

J.T.BAKER® BAKER INSTRA-ANALYZED™ ACIDS

ICP – OES/AES has become one of the standards in trace metal analysis techniques due to excellent limits of detection and linear dynamic range, multi-element capability, and reproducibility. BAKER INSTRA-ANALYZED™ acids are recommended for use in ICP-OES/AES and FAA applications.

BAKER INSTRA-ANALYZED™ acids were designed for routine trace metal analysis and EPA protocols by ICP-OES/AES, and are analyzed for up to 35 metals in the low ppb range.

BAKER INSTRA-ANALYZED™ Plus Acids

Description	Size	Avantor Part Number
Acetic Acid, Glacial	500 mL	JT9375-1
	2.5 L	JT9375-5
Hydrochloric Acid	500 mL	JT9385-1
	2.5 L	JT9385-5
Hydrofluoric Acid	4 L	JT9385-3
	500 mL	JT9387-1
Nitric Acid	500 mL	JT9368-1
	2.5 L	JT9368-5
Perchloric Acid, 70%	500 mL	JT9359-1
	2.5 L	JT9359-5
Sulfuric Acid	500 mL	JT9390-1
	2.5 L	JT9390-5

BAKER INSTRA-ANALYZED™ Acids

Description	Size	Avantor Part Number
Acetic Acid, Glacial	6 x 500 mL (PC)	JT9524-0
	6 x 2.5 L (PC)	JT9524-33
Ammonium Hydroxide, 20%	12 x 500 mL (P)	JT9733-1
	4 x 4 L (P)	JT9733-3
Hydrochloric Acid	6 x 500 mL (PC)	JT9530-0
	6 x 2.5 L (PC)	JT9530-33
Hydrofluoric Acid	12 x 500 mL (P)	JT9563-1
	6 x 500 mL (PC)	JT9598-0
Nitric Acid	4 x 2.5 L (PC)	JT9598-34
	6 x 500 mL (PC)	JT9653-0
Perchloric Acid	4 x 2.5 L (PC)	JT9653-33
	6 x 500 mL (PC)	JT9673-0
Sulfuric Acid	6 x 2.5 L (PC)	JT9673-33

(PC) = Poly-coated glass bottle, (P) = Polyethylene bottle

J.T.BAKER® BAKER ANALYZED™ ACS REAGENT ACIDS

Atomic absorption requires trace metal specifications in the parts-per-million (ppm) range in order to achieve reliable results. BAKER ANALYZED™ ACS reagent-grade acids are recommended for qualitative AAS applications, as well as general wet chemistry.

Wherever possible, products are packaged in poly or poly-coated glass bottles for enhanced safety.



BAKER ANALYZED™ ACS Reagent Grade Acids

Description	Size	Avantor Part Number
	6 x 500 mL (PC)	JT9508-0
	12 x 500 mL	JT9508-1
	6 x 2.5 L	JT9508-3
	4 x 4 L (P)	JT9508-6
Acetic Acid, Glacial (Aldehyde-Free)	6 x 2.5 L (PC)	JT9508-33
Acetic Acid, Glacial (suitable for cholesterol determination)	12 x 500 mL	JT9511-2
	6 x 2.5 L	JT9511-5
	6 x 500 mL (PC)	JT9721-0
	12 x 500 mL	JT9721-1
	6 x 2.5 L	JT9721-3
	4 x 4 L (P)	JT9721-6
Ammonium Hydroxide	6 x 2.5 L (PC)	JT9721-33
	6 x 500 mL (PC)	JT9535-0
	6 x 500 mL	JT9535-1
	6 x 2.5 L	JT9535-3
Hydrochloric Acid	6 x 2.5 L (PC)	JT9535-33
Hydrofluoric Acid	4 x 4 L (P)	JT9560-6
	12 x 500 mL (P)	JT2180-1
Hydrogen Peroxide, 3%	4 x 4 L (P)	JT2180-3
	12 x 500 mL L (P)	JT2186-1
Hydrogen Peroxide, 30%	4 x 4 L (P)	JT2186-3

Description	Size	Avantor Part Number
	6 x 500 mL (PC)	JT9601-0
	6 x 500 mL	JT9601-1
Nitric Acid, 69 -70%	4 x 2.5 L (PC)	JT9601-34
	6 x 500 mL (PC)	T9656-0
Perchloric Acid, 60 - 62%	4 x 2.5 L (PC)	JT9656-33
	6 x 500 mL (PC)	JT9652-0
	6 x 500 mL	JT9652-1
	4 x 2.5 L	JT9652-4
Perchloric Acid, 69 - 72%	4 x 2.5 L (PC)	JT9652-33
	6 x 500 mL (PC)	JT0260-0
	12 x 500 mL	JT0260-1
	6 x 2.5 L	JT0260-3
Phosphoric Acid	6 x 2.5 L (PC)	JT0260-33
	12 x 500 mL (P)	JT3143-1
Potassium Hydroxide, 45% Solution	4 x 4 L (P)	JT3143-3
	12 x 500 mL (P)	JT3727-1
Sodium Hydroxide, 50% Solution	4 x 4 L (P)	JT3727-3
	6 x 500 mL (PC)	JT9681-0
	12 x 500 mL	JT9681-1
	6 x 2.5 L	JT9681-3
Sulfuric Acid, 95 -98%	6 x 2.5 L (PC)	JT9681-33

(PC) = Poly-coated glass bottle, (P) = Polyethylene bottle