

# High purity acids and bases

Suprapur® acids and bases | Ultrapur acids

The life science business of Merck KGaA,  
Darmstadt, Germany operates as  
MilliporeSigma in the U.S. and Canada.

# High purity acids and bases

Suprapur® acids and bases | Ultrapur acids

Digestion with acids is often used during sample preparation. The reagents for sample preparation have an important impact on the outcome of the measurement. In modern instrumental trace analysis any impurity can disturb the measurement. Acids with low impurities should be used to minimize the interference on the instrument signal. High purity acids and bases Suprapur® acids and bases and Ultrapur acids offer the most suitable purity of wet digestion materials and they have low impurities during the entire minimum shelf life.

## Advantages

- Choose your purity grade for instrumental trace analysis
- Suprapur® acids filled in borosilicate glass or extra pure HDPE material
- Ultrapur acids filled in PFA bottles
- Certificate of Analysis gives an extensive impurity profile

# quality grades for your individual needs



## Different grades to meet your needs

Take a look at our high purity material for wet digestion Suprapur® acids and bases and Ultrapur acids, especially for instrumental trace analysis whenever you are using an acid, you have to consider your application, your target and of course your budget. Each application is different and therefore we offer a wide range of acids in different grades and many different packaging sizes and materials.

### Ultrapur acids

- High purity acids, hydrogen peroxide
- Highly sophisticated instrumental ultra-trace analysis, e.g. ICP-MS
- Specified parameters in ppt range

### Suprapur® acids and bases

- High purity acids and bases
- Highly sophisticated instrumental trace analysis, e.g. AAS and ICP-OES
- Specified parameters in ppb range

## Reagents for wet digestion

The more sensitive the instrumental detection becomes, the more important it is to use highly pure reagents. We provide a whole range of high purity reagents that meet the demands of modern instrumental analysis. During the sample preparation it is important to know the blank values of the reagents. On the certificate you find the specification and actual batch values of the parameters.

### Suprapur® acids and bases are suitable for trace analysis in the ng/g (ppb) range.

Suprapur® acids are filled in borosilicate or extra pure PE bottles. The material minimizes any elemental impurity of the acid, so the specification of the unopened bottle is kept during the minimum shelf life. The bottles are cleaned and pre-conditioned before filling. Quality control is done after filling. This gives you the assurance that the certified batch values are those values of the filled acid. Suprapur® reagents are packed in a stable outer-box.

Hydrogen peroxide Suprapur® acids & bases are packed in a black bottle to protect it against light. The bottle is made of extra pure PE material to avoid any contamination. To make it more safe for you: hydrogen peroxide bottles are closed with the SafetyCap. The SafetyCap with the PTFE membrane releases the pressure, but avoids any contamination.

### Ultrapur acids are preferred for ultra-trace analysis in the pg/g (ppt) range.

Ultrapur reagents are produced by sub-boiling distillation. The slowly distilled reagents subsequently have the lowest possible trace-impurities. Ultrapur reagents are exclusively filled in pre-conditioned PFA (fluoropolymer) bottles. This material meets the highest demands of all users for ultra-trace instrumental analysis, e.g. ICP-MS. Ultrapur reagents are packed in a stable outer-box.



## Ordering information Suprapur® acids and bases

Designation	Content	Packaging	Fisher Scientific Cat. No.
Acetic acid 100% Suprapur®	250 mL	Glass bottle	<b>M1000660250</b>
	1 L	Glass bottle	<b>M1000661000</b>
Ammonia solution 25% Suprapur®	250 mL	PE bottle	<b>M1054280250</b>
	500 mL	PE bottle	<b>M1054280500</b>
	1 L	PE bottle	<b>M1054281000</b>
	2.5 L	PE bottle	<b>M1054282500</b>
	50 g	PE bottle	<b>M1007650050</b>
	500 g	PE bottle	<b>M1007650500</b>
Formic acid 98–100% Suprapur®	250 mL	Glass bottle	<b>M1116700250</b>
	1 L	Glass bottle	<b>M1116701000</b>
Hydrobromic acid 47% Suprapur®	250 mL	Glass bottle	<b>M1003060250</b>
	1 L	Glass bottle	<b>M1003061000</b>
Hydrochloric acid 30% Suprapur®	250 mL	PE bottle	<b>M1003180250</b>
	500 mL	PE bottle	<b>M1003180500</b>
	1 L	PE bottle	<b>M1003181000</b>
	2.5 L	PE bottle	<b>M1003182500</b>
Hydrofluoric acid 40% Suprapur®	250 mL	HDPE dosage bottle <sup>1</sup>	<b>M1003350250</b>
	500 mL	HDPE dosage bottle <sup>1</sup>	<b>M1003350500</b>
	1 L	PE bottle	<b>M1003351000</b>
	2.5 L	PE bottle	<b>M1003352500</b>
Hydrogen peroxide 30% Suprapur®	250 mL	PE bottle with SafetyCap <sup>2</sup>	<b>M1072980250</b>
	500 mL	PE bottle with SafetyCap <sup>2</sup>	<b>M1072980500</b>
	1 L	PE bottle with SafetyCap <sup>2</sup>	<b>M1072981000</b>
Nitric acid 65% Suprapur®	250 mL	Glass bottle	<b>M1004410250</b>
	1 L	Glass bottle	<b>M1004411000</b>
Oxalic acid dihydrate Suprapur®	100 g	PE bottle	<b>M1004890100</b>
Perchloric acid 70% Suprapur®	250 mL	Glass bottle	<b>M1005170250</b>
	1 L	Glass bottle	<b>M1005171000</b>
Ortho-Phosphoric acid 85% Suprapur®	250 mL	PE bottle	<b>M1005520250</b>
	500 mL	PE bottle	<b>M1005520500</b>
	1 L	PE bottle	<b>M1005521000</b>
	2.5 L	PE bottle	<b>M1005522500</b>
Sodium hydroxide solution 30% Suprapur®	250 mL	PE bottle	<b>M1055890250</b>
	1 L	PE bottle	<b>M1055891000</b>
	2.5 L	PE bottle	<b>M1055892500</b>
Sulphuric acid 96% Suprapur®	250 mL	Glass bottle	<b>M1007140250</b>
	1 L	Glass bottle	<b>M1007141000</b>

<sup>1</sup>: See product details on page 6

<sup>2</sup>: See product details on page 7

## Ordering information Ultrapur acids

Designation	Content	Packaging	Fisher Scientific Cat. No.
Hydrochloric acid 30% Ultrapur	250 mL	PFA bottle	<b>M1015140250</b>
	500 mL	PFA bottle	<b>M1015140500</b>
	1 L	PFA bottle	<b>M1015141000</b>
Hydrogen peroxide 31% Ultrapur	1 L	PFA bottle	<b>M1060971000</b>
Nitric acid 60% Ultrapur	250 mL	PFA bottle	<b>M1015180250</b>
	500 mL	PFA bottle	<b>M1015180500</b>
	1 L	PFA bottle	<b>M1015181000</b>
	250 mL	PFA bottle	<b>M1015160250</b>
Sulphuric acid 96% Ultrapur	250 mL	PFA bottle	<b>M1015160250</b>
	500 mL	PE bottle	<b>M1012620500</b>
Water Ultrapur	500 mL	PE bottle	<b>M1012620500</b>
	1 L	PE bottle	<b>M1012621000</b>

High  
purity  
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bases

# HDPE dosage bottle for hydrofluoric acid

## Hydrofluoric acid

Hydrofluoric acid is one of the most dangerous acids. Even small quantities can cause severe injuries and poisoning. To avoid such fatal accidents, we developed a pouring aid that is specially suited to the characteristics of hydrofluoric acid. All 250 and 500 mL bottles are provided with this innovative and safe pouring aid. It allows drop-by-drop withdrawal of the acid and the last drop stays reliably in the bottle. Furthermore, our exclusive S40 closure system ensures that the bottle is completely airtight.

### HDPE dosage bottle

- 250 and 500 mL bottle with a withdrawal system especially constructed for this hazardous acid (Fisher Scientific Cat. No.: M1003350250 and M1003350500)
- Allows drop-by-drop withdrawal—and the last drop stays reliably in the bottle
- Special density function of our exclusive S40 screwing system
- Allows transportation and storage in cardboard boxes



# SafetyCap

## Leakproof against liquids—allows excess pressure to be released

Hydrogen peroxide is capable of generating excess pressure through chemical reactions and is therefore supplied in bottles with a special screw cap. This cap has a valve that allows the gas formed to be released, hence preventing the build-up of pressure. For safety purposes, these bottles are additionally packaged in a PE bag.



## SafetyCap—the intelligent closure

In order to completely avoid contamination, we supply all such reagents fitted with the SafetyCap. This innovative cap allows absolutely no reagent to leak—even if the bottle is tipped. The PTFE membrane sintered onto the inside of the cap allows gas to be released but is absolutely leakproof against liquids. This has been proven in numerous warehouse and stress tests at our package testing facility at all temperatures and in all positions.

### SafetyCap

- Allows gas to be released and the internal pressure to be decreased
- Allows no liquid to escape, thus protecting the environment from contamination

Fisher Scientific Cat. No.: M1072980250,  
M1072980500 and M1072981000

# High purity acids and bases



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