



# Solvents Application Guide

Products, Packaging, and Delivery Systems

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1952 Fisher Chemical plant in New Jersey

## Pushing the Limits of Detection Further

Find exactly what you need from our portfolio of more than 800 high-purity solvents formulated to suit applications for LC/MS, HPLC, UHPLC/MS, gas chromatography, and spectrometry. Our solvents are manufactured in ISO 9001 certified facilities and undergo rigorous quality assurance testing to bring you the lot-to-lot and bottle-to-bottle consistency you rely on.

Since our beginning, we've supported the science community's research chemical needs. With years of experience and a team of highly knowledgeable and dedicated people, the Fisher Chemical brand delivers the highest levels of customer service, technical assistance, and fast, accurate delivery.

### **Trademarks of Thermo Fisher Scientific:**

Acros, AcroSeal, ChromaCare, Chromplete, EcoSafPak, Fisher Bioreagents, Fisher Chemical, FisherLOCK, FisherPak, GC Resolv, Optima, Orbitrap, PolyPac, Safe-Cote, SafeTin, Spectranalyzed, Thermo Scientific, TraceMetal, Vanquish

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# The Resources You Need, When You Need Them

Whether you know what you want or need assistance selecting the right product, we're here for you. Our sales representatives and chemical specialists can help you find the right product for your applications.

## Find Information in the Chemical Resource Center

Search the Chemical Resource Center for product information and literature, tools, application notes, and more.

Visit [fishersci.com/chemicalresource](https://fishersci.com/chemicalresource) to learn more.

## Talk with the Technical Services Team

Our Technical Services team is ready to answer your questions about our chemicals and their suitability for and appropriate use in various applications.

**Call:** 1-800-227-6701, press option 2 (Monday through Friday, 8 a.m. to 6 p.m. ET)

**Email:** [chem.techinfo@thermofisher.com](mailto:chem.techinfo@thermofisher.com)

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# Innovative Packaging Solutions

Fisher Chemical products are packaged with safety, environmental protection, handling and storage convenience, and product protection in mind. Plus, they're compliant with local, state, and national U.S. government regulations.

## Clear Glass Bottles

Borosilicate glass bottles significantly reduce contamination with metal cations ( $\text{Na}^+$  and  $\text{K}^+$ ) compared to soda-lime glass.

## Amber Glass Bottles

Used for photosensitive chemicals to protect them from light and ultraviolet radiation.

## Safe-Cote Glass Bottles

Available with both clear and amber glass, Fisher Chemical Safe-Cote bottles help protect you from hazardous chemicals. If the bottle accidentally breaks, the exterior plastic coating helps to contain the chemical and broken glass until both can be properly disposed of.

## Plastic Bottles

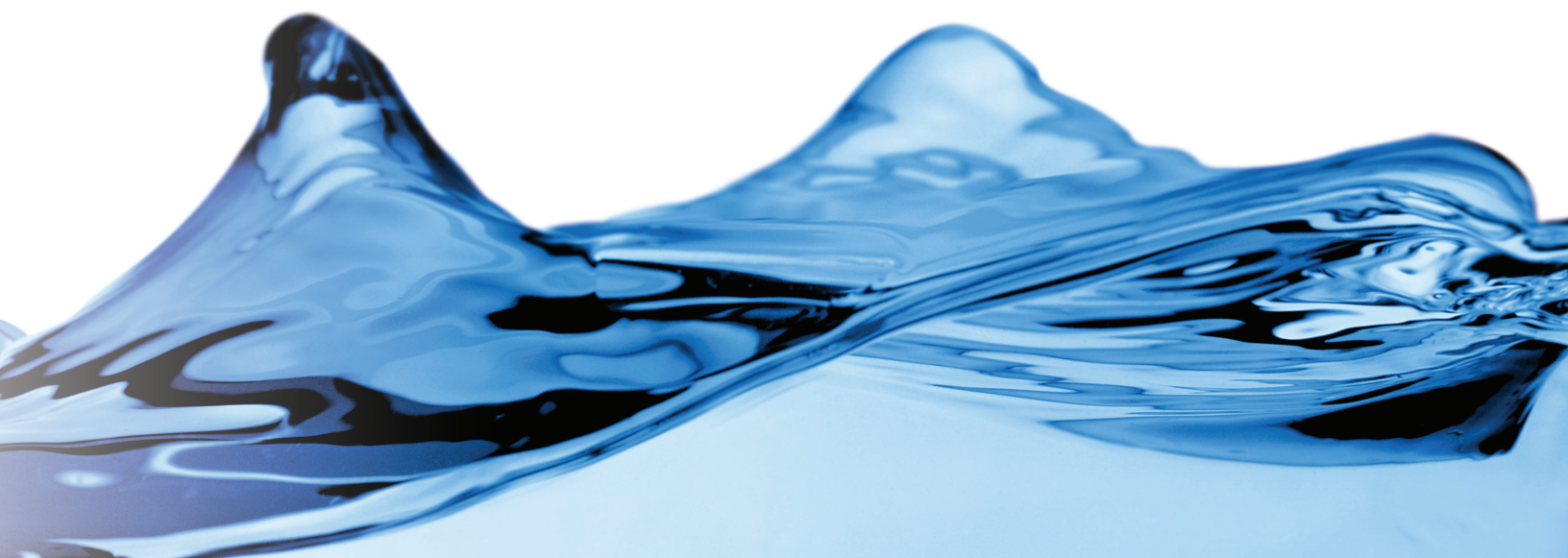
Plastic bottles help minimize breakage risk, reduce packaging weight, and provide easier and more economical shipping. Available for some wet and dry chemicals that are compatible with the plastic containers.

## Aluminum Cans

The lightweight and seamless construction of aluminum cans helps to contain ethers and other chemicals that form explosive peroxides. Their tamper-evident caps and pouring handles keep the chemicals contained, and the pure aluminum minimizes the formation of  $\text{Na}^+$  and  $\text{K}^+$  adducts — all while being pure enough for chromatography applications.

## High-Volume Solvent Delivery Systems

Available in volumes from 19 to 1350L, our environmentally friendly solvent handling options help you enhance safety, improve productivity, and protect the purity of your solvents.



# Lock in Quality and Safety

## FisherLOCK Closures

FisherLOCK caps help preserve chemical integrity with a patented, tamper-evident, secure seal that is applied to our amber glass bottles during manufacturing to lock in:



### Quality

- Provides a tight, secure seal with a visible tamper-evident interior ring
- Eliminates contamination that can occur with a plastic overseal

### Safety

- Resists back-off during transport to reduce the risk of leakage
- Color-coded to match ChemAlert codes for hazard categories and storage requirements

### Reliability

- Materials rigorously tested for chemical compatibility
- Closures do not interfere when attaching open bottles directly to standard equipment

### Convenience

- Easy-open design with large ridges for secure grip
- Reseals readily after initial opening



## ChemAlert Color Coding



**Red (R):** Flammable; store in area segregated for flammable reagents



**Blue (B):** Health hazard; toxic if inhaled, ingested, or absorbed through skin; store in secure area



**Yellow (Y):** Reactive and oxidizing; may react violently with air, water, or other substances; store away from flammable and combustible materials



**White (W):** Corrosive; may harm skin, eyes, or mucous membranes; store away from chemicals that are coded red, yellow, or blue



**Gray (G):** Moderate hazard in any of the categories above; for general chemical storage

**Exceptions:** Reagents that are incompatible with other chemicals with the same color code; store these separately



# Safely Serving Science

## Safe-Cote Bottles

Combine the purity of glass with the benefits of plastic with PVC-coated Fisher Chemical Safe-Cote bottles. If the bottle breaks, glass fragments and liquid are contained, which reduce the hazards of a chemical spill, protecting you and containing the potential for environmental release.

Visit [fishersci.com/safecote](https://fishersci.com/safecote) to learn more.



Description	Purity Grade	Qty.	Cat. No.
1-Butanol	HPLC/ACS	1L, 4L	A383SK
2-Propanol	Certified ACS Plus	4L	A416SK-4
	HPLC/ACS	1L, 4L	A451SK
	Optima	4L	A464SK-4
Acetone	Certified ACS	4L	A18SK-4
	HPLC/ACS	1L, 4L	A949SK
	Optima/ACS	4L	A929SK-4
Acetonitrile	HPLC/ACS	1L, 4L	A998SK
	Optima/ACS	4L	A996SK-4
Chloroform	HPLC/ACS	1L, 4L	C606SK
	Certified ACS	4L	C298SK-4
	Spectranalyzed	4L	C574SK-4
Chloroform with Pentene	HPLC/ACS	1L, 4L	C607SK
Cyclohexane	HPLC/ACS	1L, 4L	C620SK
Ethanol, 200 Proof	Molecular Biology	1L	T038181000
Ethanol, 96%	Molecular Biology	1L	T032021000
Ethyl Acetate	HPLC/ACS	1L, 4L	E195SK
	Certified ACS	4L	E145SK-4
	Optima	4L	E196SK-4
Ethyl Alcohol	Denatured	4L	A407SK-4
Heptane	HPLC	1L, 4L	H350SK
Hexanes	HPLC	1L, 4L	H302SK
	Optima/ACS	4L	H303SK-4
	Certified ACS	4L	H292SK-4
Isooctane	HPLC/ACS	1L, 4L	O296SK
Isopropanol	Molecular Biology	1L	T036181000
Methanol	HPLC/ACS	1L, 4L	A452SK
	Certified ACS	4L	A412SK-4
	Optima/ACS	4L	A454SK-4
	Scintanalyzed/ACS	4L	A408SK-4

Description	Purity Grade	Qty.	Cat. No.
Methylene Chloride	HPLC	1L, 4L	D150SK
	HPLC/ACS	1L, 4L	D143SK
	Certified ACS	4L	D37SK-4
	Optima	4L	D151SK-4
Methylene Chloride with Cyclohexene	HPLC/ACS	4L	D138SK-4
n-Butyl Chloride	HPLC	4L	B429SK-4
N-Hexane 95%	Optima/ACS	4L	H306SK-4
Pentane	HPLC	1L, 4L	P399SK
Petroleum Ether	Certified ACS	4L	E139SK-4
	Optima/ACS	4L	E120SK-4
Tetrahydrofuran	HPLC/ACS	1L, 4L	T425SK
	Certified	4L	T397SK-4
Toluene	HPLC/ACS	1L, 4L	T290SK
	Certified ACS	4L	T324SK-4
	Optima	4L	T291SK-4
	Scintanalyzed/ACS	4L	T313SK-4
Water	HPLC	1L, 4L	W5SK
	Optima	4L	W7SK
Xylenes	Certified ACS	4L	X5SK

Products may not be available in all regions. Contact your Fisher Scientific sales representative to learn more.

## Information at Your Fingertips

### Label QR Codes

Scan the QR code on the label to retrieve safety data sheets (SDS) and lot-specific certificates of analysis (CofA) on your phone or tablet anytime, anywhere.

- Get critical safety information quickly and easily
- Respond to safety issues without delay
- Email, print, or save information

Visit [fishersci.com/QR](https://fishersci.com/QR) to learn more.



# Bring Safety and Convenience to Your Lab

## Seamless Aluminum Containers

Fisher Chemical aluminum round containers are seamless, lightweight, and have a tamper-evident cap and an easy-to-use pouring handle. Their pure aluminum construction minimizes Na<sup>+</sup> and K<sup>+</sup> adduct formation and preserves chromatographic purity better than soda-lime glass.



- Protects against leaks, corrosion, and breakage
- PTFE-lined tamper-evident closure protects contents from atmospheric contamination
- Lightweight, ergonomic, and recyclable
- Available in multiple sizes

Description	Purity Grade	Qty.	Cat. No.
1-Butanol	Certified ACS	4L	A399S-4
1,4-Dioxane	Histological	4L	D56S-4
1-Propanol	Certified ACS	4L	A414S-4
2-Propanol	Certified ACS	4L	A416S-4
	Histological	4L	A426S-4
Acetone	NF/FCC	4L	A11S-4
	Histological	4L	A16S-4
	Certified ACS	4L	A18S-4
Alcohol Reagent	Histological	4L	A962S-4
Chloroform (Ethanol as Preservative)	Technical	4L	C295S-4
	Certified ACS	4L	C298S-4
Ethyl Acetate	Certified ACS	4L	E145S-4
Ethyl Alcohol, Denatured	Laboratory	4L	A407S-4
Ethyl Ether	Laboratory	1L, 4L	E134
	Spectranalyzed	4L	E197-4
	HPLC	4L	E198-4
Ethyl Ether for Fat Extraction	Laboratory	4L	E492-4
Ethyl Ether, Anhydrous	Certified ACS	500mL, 1L, 4L	E-138
Hexanes	Technical	4L	N3S-4
	Certified ACS	4L	H291S-4
Methanol	Histological	4L	A433S-4
Methyl Ethyl Ketone	Certified ACS	4L	M209S-4
N,N-Dimethylformamide	Certified ACS	4L	D119S-4
Petroleum Ether	Certified ACS	4L	E139S-4
Pyridine	Certified ACS	4L	P368S-4
Toluene	Certified ACS	4L	T324S-4
Xylenes	Histological	4L	X3S-4
	Certified ACS	4L	X5S-4



# Eco-Friendly Options for Your Lab

## High-Volume Solvent Delivery Systems

### FisherPak

FisherPak is a refillable dispensing system that protects solvent purity and reduces spills. The reusable 316 stainless-steel container is pressurized with an inert gas to deliver the solvent. The system is closed, and the solvent remains pure.

- Customizable with an extensive line of accessories
- Integrated fork channels available for larger sizes
- Available for custom solvent blends
- Sizes: 19L, 50L, 115L, 200L, 1,350L



### BasicPak

BasicPak is a returnable, reusable drum made from high-grade 304 stainless steel. This system is designed to deliver inert gas safely to the drum (with 7 to 15psig) without contamination.

- Equipped with Micro Matic coupling technology
- Provides tamper evidence via safety pin on dust cap
- Available with 316 stainless steel heavy-duty fork channels
- Sizes: 19L, 50L, 200L



### DelPak

DelPak combines the strength and durability of steel with the chemical compatibility of polyethylene.

- Steel pail with FDA-approved high-density, blow-molded polyethylene liner
- Inner liner bottle has a two-inch buttress plug with a 0.75-inch NPT center reducer plug and a handle for easy removal
- Wire handle (9 gauge) with plastic grip
- Size: 18L



## NowPak I

The inner liner of NowPak I is an inert fluorocarbon polymer, compatible with all high-purity solvents. The liner collapses around the dip tube during dispensing to prevent air from entering the system. The sealed dispensing system also reduces the introduction of impurities.

- Six dispensing options
- Liners are pre-cleaned in a class 10/100 cleanroom
- Liner has no pigments, adhesives, additives, or stabilizers
- Double-containment design meets OSHA guidelines
- HDPE overpack includes UV-blocking additive
- Size: 19L



## NowPak II

The NowPak II pre-cleaned liner technology is contained inside a pressurizable, stainless-steel overpack and offers ultra-clean chemical dispensing. Drive gas pressure is applied to the outside of the liner to minimize gas entrapment or micro-bubble formation. The inner liner collapses as the chemicals are dispensed and is removed and discarded when empty. The overpack container is then ready for a new, pre-cleaned liner, and the closer and dip tube can also be reused.

- Reusable 304 stainless-steel overpack with maximum 15psi operating pressure
- Dispensing options: pressure or pump
- Liner options: fluoropolymer, PTFE, or PFA
- Closure options: breakseal or thread on/off
- Size: 19L



# The Ideal Choice for Large Volumes of High-Purity Solvents

## Fisher Chemical FisherPak System

Enhance safety, reduce waste, and improve efficiency with the Fisher Chemical FisherPak Solvent Delivery System. No matter the scale of your work, the system can help you process synthesis, extractions, preparative chromatography, and high-volume gas chromatography sample preparation



**Protects purity** from shipment to delivery, installation, and dispensing.

- Cleaned, pressure-tested type 316 stainless-steel containers
- Tamper-evident closure

**Enhance safety** with mechanical and manual controls for the lab and the environment.

- Closed, bottle-free system eliminates vapor exposure and reduces spills and the risk of broken glass
- Horizontal vapor venting for fire safety
- Secondary manual shut-off valves, quick-connect hardware
- Optional color-coded connectors
- Meets Department of Transportation and NFPA 30 standards

**Improve productivity** and reduce costs.

- Less solvent testing
- No bottle rinsing
- Limited disposal costs

**Practice sustainability** by reducing the amount of solid waste you generate.

- One 200L FisherPak container can replace 50 four-liter bottles
- Contains flammable and toxic solvent liquids and vapors
- Empty FisherPak containers are cleaned and refilled

FisherPak systems are configured to meet the unique requirements of your laboratory. Work with your Fisher Scientific sales representative to determine the best containers and accessories to meet your needs, including:

- Chemicals required
- Expected annual usage of each chemical
- Other site-specific requirements

Visit [fishersci.com/fisherpak](https://fishersci.com/fisherpak) to learn more.



## Commonly Requested FisherPak Solvents

Contact your Fisher Scientific sales representative to learn about custom solvents and solutions available in FisherPak.

Chemical	Density	19L	50L	115L	200L	1350L
		Gross Fill Weight (lb.)				
2-Propanol	0.785	57.1 lb.	129.5 lb.	269.6 lb.	437.9 lb.	3194.5 lb.
Acetone	0.788	57.0 lb.	129.9 lb.	270.3 lb.	439.2 lb.	3173.0 lb.
Acetonitrile	0.775	56.7 lb.	128.4 lb.	267.0 lb.	433.4 lb.	3149.0 lb.
Alcohol	0.782	56.9 lb.	129.2 lb.	268.8 lb.	436.5 lb.	3158.5 lb.
Chloroform	1.471	85.8 lb.	205.1 lb.	443.5 lb.	740.3 lb.	5208.5 lb.
Ethyl Acetate	0.902	62.0 lb.	142.4 lb.	299.2 lb.	489.4 lb.	3500.0 lb.
Hexane	0.660	51.8 lb.	115.7 lb.	237.9 lb.	382.7 lb.	2807.0 lb.
Iso-Octane	0.692	53.2 lb.	119.3 lb.	246.0 lb.	396.8 lb.	2879.0 lb.
Methanol	0.792	57.4 lb.	130.2 lb.	271.2 lb.	440.7 lb.	3173.0 lb.
Methylene Chloride	1.326	79.7 lb.	189.1 lb.	406.6 lb.	676.1 lb.	4760.0 lb.
Petroleum Ether	0.630	50.6 lb.	112.4 lb.	230.3 lb.	369.5 lb.	2600.0 lb.
Toluene	0.866	60.5 lb.	138.4 lb.	290.1 lb.	473.5 lb.	3381.4 lb.
THF	0.889	61.4 lb.	141.0 lb.	296.0 lb.	483.8 lb.	3467.0 lb.
Water	1	66.1 lb.	153.2 lb.	324.1 lb.	532.6 lb.	3800.0 lb.

Type 316 Stainless Steel, also known as surgical grade steel, better resists common forms of corrosion compared to type 304 stainless steel used in other returnable drums.

Internal electropolishing decreases any micro-trace levels of solvent-steel interaction.

External electropolishing enhances the corrosion resistance.

FisherPak's horizontal venting system is recognized by the National Fire Protection Association (NFPA) as a safer alternative to vertical venting configurations.



## FisherPak Dimensions

Size	Height (Tap to Sump)	Height (Overall)	Outer Diameter	Approximate Tare Weight	Overflow Capacity
19L	15.7 in.	22.2 in.	11.1 in.	10.8kg	20L
50L	27.8 in.	28.8 in.	16.0 in.	19.5kg	56L
115L	23.4 in.	30.5 in.	21.8 in.	32kg <sup>1</sup>	117.4L
200L	39.8 in.	47.0 in.	21.8 in.	41.6kg <sup>1</sup>	208L
1350L <sup>3</sup>	68.9 in.	71.7 in.	47.0 in. <sup>2</sup>	360kg	1441L

1. The weights of 115L and 200L drums with ID numbers above 800 will be greater.
2. The footprint of the 1350L is 47 x 47 in.; the actual container diameter is slightly less than the base width.
3. The 1350L container is made from high-grade type 304 stainless steel and is electropolished internally.

## FisherPak Accessories

Contact your Fisher Scientific sales representative to learn more about which accessories you'll need:

- Solvent dispensing kits
- Gas delivery kits
- Safety autovalves
- Heavy-duty integrated forklift channels
- Electronic level sensors, adaptors, and meters

# Purity Grades for Every Application

## UHPLC/MS Grade Solvents

Meet the requirements of your most demanding UHPLC and LC/MS analyses with the ultrapure quality of Thermo Scientific UHPLC/MS grade solvents. With ultra-low trace impurities, they ensure the least interference from the mobile phases and consistent high sensitivity for your LC/MS runs.

- Tested with UHPLC gradient suitability with UV, MS, and MS/MS specifications for high sensitive UHPLC and UHPLC/MS applications
- Filtered at 0.03µm for water and 0.1µm for organic solvents



Description	Packaging	Quantity	Cat. No.
Acetonitrile	Clear Borosilicate Glass Bottles	1L, 6 x 1L	A956-1
Methanol	Clear Borosilicate Glass Bottles	1L, 6 x 1L	A458-1
Water	Clear Borosilicate Glass Bottles	1L, 6 x 1L	W8-1

These solvents are recommended for specification tests during the installation of Thermo Scientific TSQ Series Triple Quadrupole and Orbitrap High-Resolution Mass Spectrometers and Vanquish UHPLC systems. The Thermo Scientific UHPLC/MS Reagent Installation Kit (Cat. No. UHPLCMSKIT) will help you get started with:

- 1L Acetonitrile (Cat. No. A956-1)
- 2 x 1L Methanol (Cat. No. A458-1)
- 2 x 1L Water (Cat. No. W8-1)
- 1L Thermo Scientific ChromaCare Instrument Flush Solution (Cat. No. T111101000)

ChromaCare Instrument Flush Solution is a general-purpose cleaning solution mixture made of equal parts of LC/MS grade acetonitrile, methanol, water, and 2-propanol (IPA).

Read our white paper in the resources section of [fishersci.com/fisherchemical](https://www.fishersci.com/fisherchemical) to learn more.



## Optima LC/MS Grade Solvents

Leading the industry with unprecedented LC/UV and LC/MS gradient suitability evaluation, Fisher Chemical Optima LC/MS solvents are tested using advanced UHPLC technology coupled with PDA detection optics. Each lot of Optima LC/MS solvents is screened in the 200 to 400nm wavelength range for UV-absorbing contaminants that could create interferences.

Optima LC/MS solvents are formulated for UHPLC/UV methods that require mobile phases free of UV-absorbing 2 interference.



- Low plasticizer contamination
- Exceptionally low metal ion content
- Fewer background peaks
- Higher signal intensity
- Tested to ensure low levels of UV-absorbing interference
- Filtered to 0.1µm
- Protease tested (LC/MS Water, Cat. No. W6)

Description	Packaging	Quantity	Cat. No.
2-Propanol	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	A461
Acetonitrile	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	A955
Methanol	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	A456
Water	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	W6

## Flush Solutions

Install new instruments, maintain existing instruments and columns, and reduce background noise with Thermo Scientific ChromaCare reagents.

- Keep liquid chromatography and mass spectrometry systems running clean
- Remove contaminants in flow path and columns of HPLC and LC/MS systems



Description	Packaging	Quantity	Cat. No.
LC/MS Aqueous Rinse, Probe Wash 1	Soda Lime Bottles	2.5L	T00125-2500
LC/MS Biologic Flush Solution*	Borosilicate Glass Bottles	1L	MB124-1
	Soda Lime Bottles	2.5L	MB124-1
LC/MS Instrument Flush Solution*	Borosilicate Glass Bottles	1L	T11110-1000
	Soda Lime Bottles	2.5L	T11110-2500
LC/MS Organic Rinse, Probe Wash 2	Soda Lime Bottles	2.5L	T00126-2500

\* Choose 1L borosilicate bottles for applications requiring low metal ion interference and 2.5L soda lime bottles for high-throughput applications.



## Optima LC/MS Grade Mobile Phase Blends

These ready-to-use aqueous and organic mobile phase blends are pre-blended with Optima LC/MS formic acid (FA) or trifluoroacetic acid (TFA) for UHPLC/UV and UHPLC/MS applications. They're filtered to 0.1µm for use with UHPLC separation and produced in ISO 9001-certified facilities to ensure lot-to-lot consistency.

- Reduce the likelihood of contamination
- Eliminate special glassware cleaning and handling corrosive acids
- Reduce overhead costs of preparing blends in-house
- Provide consistent low mass baselines, metal ion content, and LC/UV background

Applications: proteomics, pharmaceutical research, drug discovery, biomedical research



Description	Packaging	Quantity	Cat. No.
Acetonitrile with 0.05% TFA	Amber Glass Bottles	4L	LS1174
Acetonitrile with 0.1% FA	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	LS120
Acetonitrile with 0.1% TFA	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	LS121
Acetonitrile with 20% Water and 0.1% FA	Amber Glass Bottles	500mL	LS122-500
Formic Acid	Poly Bottles	50mL	A117-50
	Ampules	0.5mL, 1mL, 2mL, 10 x 1mL	A117
Trifluoroacetic Acid	Poly Bottles	50mL	A116-50
	Ampules	0.5mL, 1mL, 2mL, 10 x 1mL	A116
Water with 0.05% TFA	Amber Glass Bottles	4L	LS1154
Water with 0.1% FA	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	LS118
Water with 0.1% TFA	Amber Glass Bottles	500mL, 1L, 2.5L, 4L	LS119

## Specialty Mobile Phase Blends

Developed for LC/MS, our solvent blends have been formulated for proteomics, metabolomics, clinical chemistry, drug discovery, and other research applications.

- Reduced metals content to help prevent metal adduct formation
- Innovative packaging maintains solvent quality at the point of use
- Reduced safety risk associated with hazardous solvent blending, storing, and disposal
- Low impurity background using diode array detection (LC/UV)
- Lot-to-lot consistency



Description	Packaging	Quantity	Cat. No.
Ammonium Formate, Aqueous Solution, 10mM with 0.05% Formic Acid	Clear Borosilicate Glass Bottles	1L	MB123-1
Ammonium Formate, Methanol Solution, 10mM with 0.05% Formic Acid	Clear Borosilicate Glass Bottles	1L	MB122-1

## Multi-Application Solvents

Get the consistency and precision you need with Thermo Scientific Chromplete solvents designed for common analyses and separations. They're available globally and suitable for multiple techniques:

- HPLC coupled with UV, UV-Vis, PDA, ECD, and FL
- Gas chromatography coupled with FID and ECD
- UV spectrophotometry
- Extractions, purifications, and supercritical fluid chromatography

With multi-application compatibility, these solvents help reduce the number of bottles in your lab, simplifying inventory management and reducing the potential for waste — all while supporting global harmonization of results. These solvents are tested to globally recognized ACS and (excluding water) USP specifications.



Description	Packaging	Quantity	Cat. No.
2-Propanol, ACS and USP, for LC, GC, and Spectrophotometry	Amber Glass Bottles	1L	T001041000
		4L	T001044000
Acetonitrile, ACS and USP, for LC, GC, and Spectrophotometry	Amber Glass Bottles	1L	T001011000
		4L	T001014000
Methanol, ACS and USP, for LC, GC, and Spectrophotometry	Amber Glass Bottles	1L	T001021000
		4L	T001024000
Water, ACS, for LC, GC, and Spectrophotometry	Amber Glass Bottles	1L	T001031000
		4L	T001034000

## Optima Grade Solvents

Fisher Chemical Optima solvents are manufactured for use in applications for which performance is essential: HPLC, GC, spectrophotometry, environmental testing, and more.



- Screened for fluorescing and UV-absorbing contaminants
- Meet ACS specifications
- Intended for research use only
- Certificates of analysis available online and by scanning the QR code on the label
- Chromatograms available on request

Description	Packaging	Quantity	Cat. No.
2-Propanol	Amber Glass Bottles	4L	A464-4
	Safe-Cote Amber Glass Bottles	4L	A464SK-4
Acetone	Amber Glass Bottles	1L, 4L	A929
	Safe-Cote Amber Glass Bottles	4L	A929SK-4
Acetonitrile	Amber Glass Bottles	1L, 4L	A996
	Safe-Cote Amber Glass Bottles	4L	A996SK-4
Chloroform, with Amylene as Preservative	Amber Glass Bottles	4L	C297-4
Ethyl Acetate	Amber Glass Bottles	4L	E196-4
	Safe-Cote Amber Glass Bottles	4L	E196SK-4
Ethyl Acetate: Ethanol, 3:1 Solution	Amber Glass Bottles	1L, 4L	E151
Hexanes	Amber Glass Bottles	1L, 4L	H303
	Safe-Cote Amber Glass Bottles	4L	H303SK-4
n-Hexane, 95%	Amber Glass Bottles	1L, 4L	H306
	Safe-Cote Amber Glass Bottles	4L	H306SK-4
Isooctane	Amber Glass Bottles	4L	O301-4
Methanol	Amber Glass Bottles	1L, 4L	A454
	Safe-Cote Amber Glass Bottles	4L	A454SK-4
Methylene Chloride	Amber Glass Bottles	4L	D151-4
	Safe-Cote Amber Glass Bottles	4L	D151SK-4
Petroleum Ether	Amber Glass Bottles	4L	E120-4
	Safe-Cote Amber Glass Bottles	4L	E120SK-4
Tetrahydrofuran	Amber Glass Bottles	1L, 4L	T427
	Safe-Cote Amber Glass Bottles	4L	T427SK-4
Toluene	Amber Glass Bottles	4L	T291-4
	Safe-Cote Amber Glass Bottles	4L	T291SK-4
Water	Amber Glass Bottles	1L, 4L	W7
	Safe-Cote Amber Glass Bottles	4L	W7SK-4

## GC Headspace Grade Solvents

Mitigate the risk of interfering contaminants with Fisher Chemical GC Headspace grade solvents. Get clean solvent baselines with no extraneous peaks and results you can trust.

- High purity for accurate and repeatable trace-level measurement of Class 1, Class 2, and Class 3 residual solvents in pharmaceuticals
- Tested by UV absorbance for organic contamination
- Low water content for easier organic volatile impurity extractions
- Inert atmosphere packaging



Description	Packaging	Quantity	Cat. No.
Dimethyl Sulfoxide (DMSO)	Clear Glass Bottles	1L	D139-1
N,N-Dimethylacetamide (DMAC)	Clear Glass Bottles	1L	D160-1
N,N-Dimethylformamide (DMF)	Clear Glass Bottles	1L	D133-1
N-Methylpyrrolidone (NMP)	Clear Glass Bottles	1L	N140-1
Water	Clear Glass Bottles	1L	W10-1

## GC Resolv Grade Solvents

Get the very highest purity and lot-to-lot consistency for gas chromatography applications from Fisher Chemical GC Resolv solvents.

- Meet ACS specifications
- Supplied in specially cleaned bottles
- Blanketed with inert gas to maintain purity
- Certificate of Analysis available online or by scanning the QR code on the label
- Chromatograms available on request

Description	Packaging	Quantity	Cat. No.
2-Propanol	FisherPak	200L	A464*
Acetone	Amber Glass Bottles	4L	A928-4
Methanol	Amber Glass Bottles	4L	A457-4
Methanol (Low Water)	BasicPak	200L	A935*
Methylene Chloride	Amber Glass Bottles	4L	D154-4
n-Hexane	Amber Glass Bottles	4L	H307-4



## HPLC Grade Solvents

Manufactured specially for use with high-performance liquid chromatography instruments.

- Meet ACS specifications
- Submicron filtered
- Supplied in specially cleaned bottles
- Blanketed with an inert gas to maintain purity
- Certificate of Analysis available online or by scanning the QR code on the label

Description	Packaging	Quantity	Cat. No.
1-Butanol	Amber Glass Bottles	1L, 4L	A383
	Safe-Cote Amber Glass Bottles	1L, 4L	A383SK
1,2,4-Trichlorobenzene	Amber Glass Bottles	4L	O4846-4
2-Propanol	Amber Glass Bottles	1L, 4L	A451
	Safe-Cote Amber Glass Bottles	1L, 4L	A451SK
Acetone	Amber Glass Bottles	4L	A949
	Safe-Cote Amber Glass Bottles	4L	A949SK
	NowPak I	19L	A949N1-19
	FisherPak	115L	A949SS-115*
Acetonitrile	Amber Glass Bottles	1L, 2.5L, 4L	A998
	Safe-Cote Amber Glass Bottles	1L, 4L	A998SK
	NowPak I	19L	A998N1-19
Alcohol	Amber Glass Bottles	4L	A995-4
	FisherPak	200L	A995RS-200*
Chloroform (Approx. 50ppm Pentene as Preservative)	Amber Glass Bottles	1L, 4L	C607
	Safe-Cote Amber Glass Bottles	1L, 4L	C607SK
Chloroform (Approx. 75ppm Pentene as Preservative)	Amber Glass Bottles	1L, 4L	C606
	Safe-Cote Amber Glass Bottles	1L, 4L	C606SK
Cyclohexane	Amber Glass Bottles	1L, 4L	C620
	Safe-Cote Amber Glass Bottles	1L, 4L	C620SK
Dimethyl Sulfoxide	Amber Glass Bottles	4L	D159-4
Ethyl Acetate	Amber Glass Bottles	1L, 4L	E195
	Safe-Cote Amber Glass Bottles	1L, 4L	E195SK
	NowPak I	19L	E195N1-19
Ethyl Ether Anhydrous (Stabilized)	Tin Can	4L	E198-4
	FisherPak	19L	E198SS-19*
Heptane	Amber Glass Bottles	1L, 4L	H350
	Safe-Cote Amber Glass Bottles	1L, 4L	H350SK
	FisherPak	19L, 200L	H350RS*
Hexanes	Amber Glass Bottles	1L, 4L	H302
	Safe-Cote Amber Glass Bottles	1L, 4L	H302SK
	FisherPak	50L, 115L, 200L	H302SS*
Isooctane	Amber Glass Bottles	1L, 4L	O296
	Safe-Cote Amber Glass Bottles	1L, 4L	O296SK
Methanol	Amber Glass Bottles	1L, 4L	A452
	Safe-Cote Amber Glass Bottles	1L, 4L	A452SK
	NowPak I	19L	A452N1-19
Methyl tert-Butyl Ether	Amber Glass Bottles	4L	E127-4
	FisherPak	200L	E127RS-200*

Description	Packaging	Quantity	Cat. No.
Methylene Chloride	Amber Glass Bottles	1L, 4L	D150
	Safe-Cote Amber Glass Bottles	1L, 4L	D150SK
Methylene Chloride (Stabilized)	Amber Glass Bottles	1L, 4L	D143
	Safe-Cote Amber Glass Bottles	1L, 4L	D143SK
	FisherPak	50L	D143SS-50
Methylene Chloride (with Cyclohexene Preservative)	Amber Glass Bottles	1L, 4L	D138
	Safe-Cote Amber Glass Bottles	4L	D138SK
n-Butyl Chloride	Amber Glass Bottles	4L	B429
	Safe-Cote Amber Glass Bottles	4L	B429SK
Pentane	Amber Glass Bottles	1L, 4L	P399
	Safe-Cote Amber Glass Bottles	1L, 4L	P399SK
	Steel Drum	19L	P399RS-19*
Tetrahydrofuran	Amber Glass Bottles	1L, 4L	T425
	Safe-Cote Amber Glass Bottles	1L, 4L	T425SK
	FisherPak	50L	T425SS-50*
Toluene	Amber Glass Bottles	1L, 4L	T290
	Safe-Cote Amber Glass Bottles	1L, 4L	T290SK
Triethylamine	Amber Glass Bottles	100mL	O4884-100
Vinyl Acetate	BasicPak	115L	O5057FB-115*
Water	Amber Glass Bottles	1L, 4L	W5
	Safe-Cote Amber Glass Bottles	1L, 4L	W5SK
	NowPak I	19L	W5-N119

\*Special order only

## HPLC Grade Mobile Phase Blends

HPLC mobile phase blends meet the strict purity requirements of HPLC and provide a consistent concentration of formic acid (FA) or trifluoroacetic acid (TFA) with a very low LC/UV background. Pre-blended mobile phases offer a lower risk of contamination than blending solvents in-house.

- Ready-to-use
- Submicron filtered
- LC/UV tested at 210nm and 254nm to ensure low impurities
- Lot-to-lot consistency
- Packaged in specially treated bottles and sealed with FisherLOCK caps

Description	Packaging	Quantity	Cat. No.
Acetonitrile with 0.1% FA	Amber Glass Bottles	4L	HB9823-4
Acetonitrile with 0.05% TFA	Amber Glass Bottles	4L	HB9812-4
Acetonitrile with 0.1% TFA	Amber Glass Bottles	4L	HB9813-4
Mobile Phase Buffer, HPLC, pH 10, 10mM Ammonium Bicarbonate, 5% Methanol	Amber Glass Bottles	4L	T006024000
Water with 0.1% FA	Amber Glass Bottles	4L	HB523-4
Water with 0.05% TFA	Amber Glass Bottles	4L	HB512-4
Water with 0.1% TFA	Amber Glass Bottles	4L	HB513-4

## Certified ACS Plus Grade Solvents

Certified ACS Plus solvents meet or exceed the latest ACS specifications and are suitable for applications with tighter metal specifications. Certificate of Analysis available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
2-Propanol	Amber Glass Bottles	4L	A416-4
	Safe-Cote Amber Glass Bottles	4L	A416SK-4
	Poly Bottles	500mL	A416500
		1L	A4161
	SafeTin	4L	A416S-4
	Steel Pail	20L	A416-20
Steel Drum	200L	A416-200	

## Certified ACS Grade Solvents

Certified ACS Solvents meet or exceed ACS specifications and can be used for analytical applications that require tight specifications.

- Certificate of Analysis available online or by scanning the QR code on the label

Description	Packaging	Quantity	Cat. No.
1-Butanol	Amber Glass Bottles	500mL, 1L, 4L	A399
	SafeTin	4L	A399S-4
	Steel Pail	20L	A399-20
1,2-Dichloroethane	Amber Glass Bottles	500mL, 4L	E175
	Steel Pail	20L	E175-20
	FisherPak	19L, 50L	E175RS*
1,4-Dioxane	Amber Glass Bottles	500mL, 4L	D111
Acetic Anhydride	Amber Glass Bottles	100mL, 500mL, 1L, 4L	A10
Acetone	Amber Glass Bottles	4L	A18-4
	Safe-Cote Amber Glass Bottles	4L	A18SK-4
	Poly Bottles	500mL	A18500
		1L	A181
	SafeTin	4L	A18S-4
	Steel Pail	20L	A18-20
	Steel Drum	200L	A18-200
Acetonitrile	Amber Glass Bottles	1L, 4L	A21
	Steel Pail	20L	A21-20
	Steel Drum	200L	A21-200
Aniline	Amber Glass Bottles	500mL, 4L	A740I
Carbon Disulfide	Amber Glass Bottles	500mL	C184-500
	Glass Bottles	2.5L	C184-212
Chloroform (Approx. 0.75% Ethanol as Preservative)	Amber Glass Bottles	500mL, 1L, 4L	C298
	Safe-Cote Amber Glass Bottles	4L	C298SK-4
	SafeTin	4L	C298S-4
	Steel Pail	20L	C298-20
	Steel Drum	200L	C298-200
Cyclohexane	Amber Glass Bottles	500mL, 1L, 4L	C556

Description	Packaging	Quantity	Cat. No.
Dimethyl Sulfoxide	Poly Bottles	500mL, 1L, 4L	D128
	FisherPak	50L	D128RS-50
Ethanol	Amber Glass Bottles	2L	AC615090020
	Poly Bottles	500mL	AC615095000
		1L	AC615090010
		4L	AC615090040
Ethyl Acetate	Amber Glass Bottles	500mL, 1L, 4L	E145
	Safe-Cote Amber Glass Bottles	4L	E145SK-4
	SafeTin	4L	E145S-4
	Steel Pail	20L	E145-20
	Steel Drum	200L	E145-200
Ethyl Ether Anhydrous (BHT Stabilized)	Aluminum Can	500mL, 1L, 4L	E138
	Steel Pail	20L	E138-20
Ethylene Glycol	Amber Glass Bottles	1L	A397-1
	Steel Drum	200L	H292-200
Formaldehyde, 37% by Weight (with Preservative)	Amber Glass Bottles	4L	F794
	Poly Bottles	500mL	F79500
		1L	F791
		4L	F79P-4
	Poly Pail	20L	F79-20
	PolyPac	20L	F79P-20
	Poly Drum	200L	F79-200
Formamide	Amber Glass Bottles	1L	F84-1
Glycerol	Amber Glass Bottles	4L	G334
	Poly Bottles	500mL	G33500
		1L	G331
	Poly Pail	20L	G33-20
	Steel Drum	200L	G33-200
Hexanes	Amber Glass Bottles	500mL, 1L, 4L	H292
	Safe-Cote Amber Glass Bottles	4L	H292SK
	Steel Pail	20L	H292-20
	FisherPak	28L, 50L, 115L	H292SS*
	Steel Drum	200L	H292-200
	FisherPak	200L	H292SS-200*
	Isobutyl Alcohol	Amber Glass Bottles	1L, 4L
Isooctane	Amber Glass Bottles	1L, 4L	O299
	FisherPak	115L	O299RS-115*
Methanol	Amber Glass Bottles	500mL, 1L, 4L	A412
	Safe-Cote Amber Glass Bottles	4L	A412SK-4
	Poly Bottles	4L	A412P-4
	Unlined Steel Pail	20L	A412-20
	Unichrome Steel Pail	20L	A434-20
	Steel Drum	200L	A412-200
Methyl Ethyl Ketone	Amber Glass Bottles	500mL, 1L, 4L	M209-500
	SafeTin	4L	M209S-4
	Steel Pail	20L	M209-20
	Steel Drum	200L	M209-200



Description	Packaging	Quantity	Cat. No.
Methyl iso-Butyl Ketone	Amber Glass Bottles	1L, 4L	M213
	Steel Pail	20L	M213-20
	Steel Drum	200L	M213-200
Methylene Chloride (Stabilized)	Amber Glass Bottles	500mL, 1L, 4L	D37
	Safe-Cote Amber Glass Bottles	4L	D37SK-4
	Steel Pail	20L	D37-20
	Steel Drum	200L	D37-200
Morpholine	Amber Glass Bottles	1L	M263-1
n-Amyl Alcohol	Amber Glass Bottles	500mL, 4L	A394
N,N-Dimethylformamide	Amber Glass Bottles	500mL, 1L, 4L	D119
	SafeTin	4L	D119S-4
	Poly Pail	20L	D119-20
	Steel Drum	200L	D119-200
Nitrobenzene	Amber Glass Bottles	500mL, 4L	N911
Nitromethane	Amber Glass Bottles	500mL	N98-500
Petroleum Ether	Safe-Cote Amber Glass Bottles	4L	E139SK-4
Pyridine	Amber Glass Bottles	500mL, 1L, 4L	P368
	SafeTin	4L	P368S-4
Toluene	Amber Glass Bottles	500mL, 1L, 4L	T324
	Safe-Cote Amber Glass Bottles	4L	T324SK-4
	SafeTin	4L	T324S-4
	Steel Pail	20L	T324-20
	Steel Drum	200L	T324-200
Trichloroethylene (Stabilized)	Amber Glass Bottles	500mL, 4L	T341
	Steel Pail	20L	T341-20
Xylene	Amber Glass Bottles	500mL, 1L, 4L	X5
	Safe-Cote Amber Glass Bottles	4L	X5SK-4
	Poly Bottles	1 gal.	X5P-1GAL
	SafeTin	4L	X5S-4
	Steel Pail	20L	X5-20
	Steel Drum	200L	X5-200

*\*Special order only*

## Certified Grade Solvents

Certified solvents are manufactured for general analytical applications and meet the purity standard established by the Fisher Scientific team.

- Purity is guaranteed to meet published maximum limits
- Certificate of Analysis available online or by scanning the QR code on the label

Description	Packaging	Quantity	Cat. No.
1-Octanol	Amber Glass Bottles	500mL, 4L	A402
1-Propanol	Amber Glass Bottles	500mL, 1L, 4L	A414
	SafeTin	4L	A414S-4
	Steel Pail	20L	A414-20
	BasicPak	50L	A414RB-50*
1,1,2,2-Tetrabromoethane	Amber Glass Bottles	100mL	A29-100
1,2-Dimethoxyethane	Amber Glass Bottles	1L, 4L	O2430

Description	Packaging	Quantity	Cat. No.
2-Chloro-2-Methylpropane	Amber Glass Bottles	500mL	O1875-500
2-Methylbutane	Amber Glass Bottles	4L	O3551-4
2-Propanol	Amber Glass Bottles	1L, 4L	A417
Acetonitrile	Amber Glass Bottles	500mL	O1034-500
Acetophenone	Amber Glass Bottles	500mL	A22-500
Acetyl Acetone	Amber Glass Bottles	500mL	A25-500
Benzyl Alcohol	Amber Glass Bottles	500mL, 4L	A396
	Steel Drum	200L	A396-200
Chlorobenzene	Amber Glass Bottles	500mL, 1L	B255
	FisherPak	200L	B254RS-200*
Cyclohexanone	Amber Glass Bottles	1L, 4L	O2109
	Stainless Steel Drum	200L	O2109SS-200
Decane	Amber Glass Bottles	500mL	O2128-500
Diisopropylamine	Amber Glass Bottles	4L	O2412-4
Ethylbenzene	Amber Glass Bottles	1L	O2751-1
Ethylene Glycol	Amber Glass Bottles	500mL, 1L, 4L	E178
	Steel Drum	200L	E178-200
Formalin, Buffered, 10% (Acetate Buffer)	Poly Bottle	4L	SF99-4
	PolyPac	20L	SF99-20
Heptane	Amber Glass Bottles	1L, 4L	O3008
	FisherPak	115L	O3008RS-115*
Hexanes	Amber Glass Bottles	500mL, 4L	H291-500
	SafeTin	4L	H291S-4
	Steel Pail	20L	H291-20
	Steel Drum	200L	H291-200
Isoamyl Alcohol	Amber Glass Bottles	500mL, 4L	A393
Isopropyl Acetate	Poly Bottle	1L, 2.5L	O6111
Isopropyl Ether	Amber Glass Bottles	500mL, 4L	E141
Methylal	Amber Glass Bottles	500mL	M222-500
Methyl Acetate	Amber Glass Bottles	500mL, 4L	M203
Monomethyl Ether	Amber Glass Bottles	500mL, 4L	E128
n-Butyl Bromide	Amber Glass Bottles	500mL	B400-500
n-Butyl Chloride	Amber Glass Bottles	1L, 4L	B416
n-Butylamine	Amber Glass Bottles	500mL	B415-500
N,N-Dimethylacetamide	Amber Glass Bottles	500mL	D135-500
o-Dichlorobenzene	Amber Glass Bottles	1L	O2231-1
o-Xylene	Amber Glass Bottles	4L	O5081-4
p-Xylene	Amber Glass Bottles	500mL, 4L	O5082
Pentane	Amber Glass Bottles	4L	O4062-4
	FisherPak	19L	O4062RS-19*
	Steel Pail	20L	O4062-20
Petroleum Ether	FisherPak	115L	E120SS-115*
Sec-Butanol	Amber Glass Bottles	1L, 4L	O1664
Tert-Amyl Alcohol	Amber Glass Bottles	1L	A730-1
Tert-Butanol	Poly Bottle	500mL, 1L	A401

Description	Packaging	Quantity	Cat. No.
Tetrahydrofuran	Amber Glass Bottles	500mL, 1L, 4L	T397
	Safe-Cote Glass	4L	T397SK-4
	BasicPak	19L, 200L	T397RB*
	Steel Pail	20L	T397-20
	FisherPak	50L, 200L	T397RS*
	Steel Drum	200L	T397-200
Triethanolamine	Amber Glass Bottles	500mL, 1L, 4L	T407

\*Special order only

## Spectranalyzed Grade Solvents

Fisher Chemical Spectranalyzed solvents are for use in spectrophotometry with ultraviolet and visible wavelength detectors.

- Meet all ACS specifications
- Certificate of Analysis available online or by scanning the QR code on the label

Description	Packaging	Quantity	Cat. No.
1-Butanol	Amber Glass Bottles	4L	A400-4
1,2-Dichloroethane	Amber Glass Bottles	4L	E190-4
2-Propanol	Amber Glass Bottles	1L, 4L	A419
Acetone	Amber Glass Bottles	1L, 4L	A19
	FisherPak	115L	A19RS-115*
Carbon Disulfide	Amber Glass Bottles	500mL	C573-500
Chloroform (Approx. 0.75% Ethanol as Preservative)	Amber Glass Bottles	1L, 4L	C574
	Safe-Cote Amber Glass Bottles	4L	C574SK-4
Cyclohexane	Amber Glass Bottles	1L, 4L	C555
Dimethyl Sulfoxide	Amber Glass Bottles	1L	D136-1
Ethyl Acetate	Amber Glass Bottles	4L	E198-4
Ethyl Ether	Tin Can	1L, 4L	E197
Glycerol	Amber Glass Bottles	1L, 4L	G153
Heptane	Amber Glass Bottles	4L	H340-4
Hexanes	Amber Glass Bottles	1L, 4L	H334
Isooctane	Amber Glass Bottles	1L, 4L	O300
Methanol	Amber Glass Bottles	1L, 4L	A408
	Safe-Cote Amber Glass Bottles	4L	A408SK-4
Methylene Chloride (Stabilized)	Amber Glass Bottles	1L, 4L	D35
N,N-Dimethylformamide	Amber Glass Bottles	1L, 4L	D131
Pentane	Amber Glass Bottles	1L	P393-1
Tetrahydrofuran	Amber Glass Bottles	4L	T424-4
Toluene	Amber Glass Bottles	4L	T330-4

\*Special order only

## Scintanalyzed Grade Solvents

Fisher Chemical Scintanalyzed solvents are specially formulated and tested for liquid scintillation counting. Certificates of Analysis are available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
Toluene	Amber Glass Bottles	4L	T313-4
	Safe-Cote Amber Glass Bottles	4L	T313SK-4
Xylene	Amber Glass Bottles	4L	X16-4

## Electronic Grade Solvents

Electronic grade solvents are manufactured to ensure low levels of metal contamination and suitable for use in electronics and circuit board manufacturing. Certificates of Analysis are available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
Acetone	Amber Glass Bottles	4L	A946-4
Methanol	Poly Bottles	4L	A947-4
Trichloroethylene	Amber Glass Bottles	4L	T403-4

## Histological Grade Solvents

Histological grade solvents are specially prepared for tissue processing and other histological and cytological procedures. Certificates of Analysis are available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
1,4-Dioxane	SafeTin	4L	D56S-4
2-Propanol	Poly Bottles	1 gal.	A426F-1GAL
	Poly Bottles	4L	A426P-4
	SafeTin	4L	A426S-4
	Steel Pail	20L	A426S-20
	Steel Drum	200L	A426S-200
Acetone	Poly Bottles	1 gal.	A16F-1GAL
	Poly Bottles	4L	A16P-4
	SafeTin	4L	A16S-4
	Steel Pail	20L	A16S-20
Alcohol	Rectangular Poly Bottles	1 gal.	A962F-1GAL
	Amber Glass	4L	A962-4
	Poly Bottles	4L	A962P-4
	SafeTin	4L	A962S-4
	Steel Drum	200L	A962-200
	BasicPak	200L	A962RB-200*
	FisherPak	200L	A992RS-200*
Ethanol, Anhydrous	Poly Bottles	1 gal.	A405F-1GAL
	Poly Bottles	4L	A405P-4
	Steel Pail	20L	A405-20



Description	Packaging	Quantity	Cat. No.
Ethanol, CDA19	Poly Bottles	1 gal.	A406F-1GAL
	Poly Bottles	4L	A406P-4
	Steel Pail	20L	A406-20
Formaldehyde, 37% by Weight	Poly Bottles	1 gal.	F75F-1GAL
	Poly Bottles	1 gal.	F75P-1GAL
	PolyPac	20L	F75P-20
Formalin Solution, 10%	Poly Bottles	4L	SF98-4
	PolyPac	20L	SF98-20
Methanol	Poly Bottles	1 gal.	A433F-1GAL
	Poly Bottles	4L	A433P-4
	SafeTin	4L	A433S-4
	Steel Pail	20L	A433S-20
	Steel Drum	200L	A433S-200
Tetrahydrofuran	Amber Glass Bottles	500mL, 4L	T400-500
	Steel Pail	20L	T400-20
Toluene	Poly Bottles	1 gal.	T326F-1GAL
	Poly Bottles	4L	T326P-4
	Steel Pail	20L	T326S-20
Xylene	Poly Bottles	1 gal.	X3F-1GAL
	Poly Bottles	1 gal.	X3P-1GAL
	SafeTin	4L	X3S-4
	Steel Pail	20L	X3S-20
	BasicPak	50L	X3RB-50*
	Steel Drum	200L	X3S-200

\*Special order only

## Laboratory Grade Solvents

Laboratory grade solvents are of reasonable quality and purity for use in procedures where no official specifications are required. Certificates of Analysis are available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
1-Propanol	BasicPak	50L	A414RB-50*
1,1,1,2,2-Tetrabromoethane	Amber Glass Bottles	500mL, 4L	A33
2-Octanol	Amber Glass Bottles	500mL	O269-500
2-Propanol	Amber Glass Bottles	4L	A415-4
	Steel Pail	20L	A415-20
Amyl Acetate	Amber Glass Bottles	500mL, 4L	A718
Carbon Disulfide	Clear Glass Bottles		C183-212
Chlorobenzene	Amber Glass Bottles	4L	B254-4
	Steel Pail	20L	B254-20
	FisherPak	200L	B254RS-200*
Cyclohexanone	Amber Glass Bottles	4L	C550-4
Ethanolamine	Amber Glass Bottles	1L, 4L	M251
Ethylene Glycol Monoethyl Ether Acetate	Amber Glass Bottles	4L	E181-4
Ethylene Glycol Monoethyl Ether	Amber Glass Bottles	1L, 4L	E180
	Steel Pail	20L	E180-20
Ethyl Ether	Aluminum Can	1L	E134-1
	Tin Can	4L	E134-4
	Steel Pail	20L	E134-20
Ethyl Ether for Fat Extraction	Tin Can	4L	E492-4
	Steel Pail	20L	E492-20
Ethylene Glycol	Amber Glass Bottles	4L	E177-4
	Steel Pail	20L	E177-20
Ligroine, 100% Heptane	Amber Glass Bottles	4L	O3387-4
Ligroine, Hexane	Steel Pail	20L	O3386-20
Methanol	Amber Glass Bottles	4L	A411-4
	Steel Pail	20L	A411-20
n-Butyl Phosphate	Amber Glass Bottles	500mL, 4L	B404
Petroleum Ether	FisherPak	115L	E120SS-115*
Tetrahydrofuran	BasicPak	19L, 200L	T397RB*
	FisherPak	50L, 200L	T397RS*
Toluene	Amber Glass Bottles	4L	T323-4
	Steel Pail	20L	T323-20
Triethylene Glycol	Amber Glass Bottles	4L	T346-4
Xylene	Amber Glass Bottles	4L	X4-4
	Steel Pail	20L	X4-20

\*Special order only

## Technical Grade Solvents

Technical grade solvents are of reasonable quality and purity for general laboratory use in procedures where no official standards are required. Certificates of Analysis are available online or by scanning the QR code on the label.

Description	Packaging	Quantity	Cat. No.
1-Butanol	Amber Glass Bottles	4L	A398-4
1-Propanol	BasicPak	50L	A414RB-50*
Acetone	Steel Pail	20L	A13-20
	Steel Drum	200L	A13-200
Chlorobenzene	FisherPak	200L	B254RS-200*
Chloroform (Approx. 0.75% Ethanol as Preservative)	Amber Glass Bottles	4L	C295-4
	SafeTin	4L	C295S-4
	Steel Pail	20L	C295-20
Diacetone Alcohol	Amber Glass Bottles	4L	D17-4
Diethylenetriamine	Amber Glass Bottles	500mL	D126-500
Heptane	Steel Pail	20L	H20-20
	Steel Drum	200L	H20-200
Hexanes	SafeTin	4L	N3S-4
	Steel Drum	20L, 200L	N3
Methyl Ethyl Ketone	Amber Glass Bottles	1L, 4L	M208
	Steel Pail	20L	M208-20
n-Butyl Acetate	Amber Glass Bottles	4L	B395-4
Petroleum Ether	FisherPak	115L	E120SS-115*
Pyridine	Amber Glass Bottles	4L	P369-4
Tetrachloroethylene	Amber Glass Bottles	4L	C182-4
	Steel Pail	20L	C182-20
Tetrahydrofuran	BasicPak	19L, 200L	T397RB*
	FisherPak	50L, 200L	T397RS*
Trichloroethylene	Amber Glass Bottles	4L	T340-4
Triethylenetetramine	Amber Glass Bottles	500mL, 1L	T410

\*Special order only

## Reagent Grade Solvents

Reagent grade solvents are of reasonable purity and for use in manufacturing and other general uses that have no official standard for quality or impurity levels..

Description	Packaging	Quantity	Cat. No.
1-Propanol	BasicPak	50L	A414RB-50*
Chlorobenzene	FisherPak	200L	B254RS-200*
Cyclohexane	Amber Glass Bottles	4L	02093-4
	Steel Pail	20L	02093-20
Cyclohexanol	Amber Glass Bottles	500mL	C558-500
Cyclohexene (Contains 0.01% tert-Butylcresol as Inhibitor)	Amber Glass Bottles	1L	02111-1
Diethylene Glycol	Amber Glass Bottles	1L	D49-1
Ethyl Acetoacetate	Amber Glass Bottles	500mL	E146-500
Octane	Amber Glass Bottles	1L	03980-1
Petroleum Ether	FisherPak	115L	E120SS-115*
Propylene Oxide	Amber Glass Bottles	1L	04332-1
Tetrabutylammonium Iodide (White Crystals)	Poly Bottles	100g	06109-100
Tetrachloroethylene (Stabilized)	Amber Glass Bottles	4L	04586-4
Tetrahydrofuran	BasicPak	19L, 200L	T397RB*
	FisherPak	50L, 200L	T397RS*
Triethylamine	Amber Glass Bottles	1L, 4L	04885
	Steel Pail	20L	04885-20

\*Special order only

## Multicompendial Solvents

Multicompendial solvents meet the analytical test methods of the United States Pharmacopeia (USP), the National Formulary (NF), the Food Chemicals Codex (FCC), the European Pharmacopeia (EP), the British Pharmacopeia (BP), and/or the Japanese Pharmacopeia (JP).

Description	Grade						Packaging	Quantity	Cat. No.
	NF	FCC	USP	BP	EP	JP			
2-Propanol			X				Amber Glass Bottles	500mL, 4L	A516
							Steel Pail	20L	A516-20
							Steel Drum	200L	A516-200
Acetone	X	X					Amber Glass Bottles	1L, 4L	A11
							SafeTin	4L	A11S-4
							Steel Pail	20L	A11-20
							Steel Drum	200L	A11-200
	X	X				X	Amber Glass Bottles	4L	A9-4
							Steel Pail	20L	A9-20
						Steel Drum	200L	A9-200	
Benzyl Alcohol	X						Amber Glass Bottles	500mL, 4L	A395
	X			X	X		Amber Glass Bottles	4L	A392
Ethyl Acetate	X						Amber Glass Bottles	4L	E124-4
							Steel Pail	20L	E124-20
								FisherPak	200L
Formaldehyde (40% by Volume)			X				Poly Bottles	4L	F77P-4
							Poly Pail	20L	F77-20
							PolyPac	20L	F77P-20
							Steel Drum/Poly Liner	200L	F77-200
Glycerol		X	X				Amber Glass Bottles	4L	G314
							Poly Bottles	500mL	G31500
								1L	G311
							Rigid Poly Bottles	20L	G31-20
				Poly Drum	200L	G31-200			
		X	X	X	X	X		Amber Glass Bottles	4L
							Poly Pail	20L	G30-20
							Steel Drum	200L	G30-200
Methanol	X						Amber Glass Bottles	500mL, 4L	A413
							Steel Pail	20L	A413-20
							Steel Drum	200L	A413-200
Pentane			X	X	X	X	FisherPak	28L	P399RS-28*
Propylene Glycol		X	X				Amber Glass Bottles	1L, 4L	P355
						Steel Pail	20L	P355-20	
						Steel Drum	200L	P355-200	
Triethanolamine	X						Amber Glass Bottles	500mL, 4L	T350

\*Special order only

## Life Sciences Research Grade Solvents

Life sciences research grade solvents include DNase-, RNase-, and protease-free molecular biology grade products. The ethanol solutions pair well with Invitrogen and Thermo Scientific purifications kits.

Description	Grade	Packaging	Quantity	Cat. No.
Acetonitrile, Anhydrous	Septum Sealed	Amber Glass Bottles	50mL	BP1165-50
	DNA Synthesis	Amber Glass Bottles	450mL, 4L	BP1170
		NowPak I	19L	BP1170N-119
		NowPak II	19L	BP1170N-219*
Chloroform (Approx. 0.75% Ethanol as Preservative)	Molecular Biology	Amber Glass Bottles	1L	BP1145-1
Dimethyl Formamide	Sequencing	Amber Glass Bottles	500mL, 4L	BP1160
		FisherPak	19L, 28L, 50L, 200L	BP1160RS*
		Steel Drum	50L	BP1160SS-50
Dimethyl Sulfoxide	Cell Culture	Amber Glass Bottles	100mL	BP231100
		Poly Bottles	1L	BP2311
			4L	BP2314
Ethanol, 200 Proof	Molecular Biology	Amber Glass Bottles	100mL	BP2818100
		Poly Bottles	500mL	BP2818500
			4L	BP28184
		Safe-Cote Amber Glass Bottles	1L	T038181000
Ethanol, Denatured, 70%	Molecular Biology	Poly Bottles	1 gal.	BP8203-1GAL
Ethanol Solution, 70%	Molecular Biology	Poly Bottles	500mL, 1L, 4L	BP8201
Ethanol Solution, 96%	Molecular Biology	Poly Bottles	500mL, 1L, 4L	BP8202
		Safe-Cote Amber Glass Bottles	1L	T032021000
Ethyl Acetate	Sequencing	Amber Glass Bottles	1L, 4L	BP1125
Ethylene Glycol		Amber Glass Bottles	1L, 4L	BP230
Formamide	Molecular Biology	Amber Glass Bottles	100mL, 500mL	BP227
Glycerol	Molecular Biology	Poly Bottles	1L, 4L	BP229
Heptane	Sequencing	Amber Glass Bottles	500mL	BP1115-500
Isoamyl Alcohol	Molecular Biology	Amber Glass Bottles	500mL	BP1150-500
Isopropanol	Molecular Biology	Amber Glass Bottles	2.5L	BP2618212
		Poly Bottles	1L	BP26181
			4L	BP26184
		Safe-Cote Amber Glass Bottles	1L	T036181000
Methanol	Sequencing	Amber Glass Bottles	1L, 4L	BP1105
N-Methylpyrrolidone		Amber Glass Bottles	4L	BP1172-4
N-Propanol	Sequencing	Amber Glass Bottles	500mL	BP1130-500
Pyridine	Sequencing	Amber Glass Bottles	500mL	BP1155-500
Tetrahydrofuran	Sequencing	Amber Glass Bottles	1L	BP1140-1
Water	Molecular Biology	Poly Bottles	100mL, 1L, 4L, 10L	BP2819
		PolyPac	20L	BP2819-20
	Microbial Cell Culture	Poly Bottles	100mL, 500mL, 1L	BP2820
Water (DEPC Treated, for RNA Work)	Molecular Biology	Poly Bottles	1L	BP561-1

\*Special order only



## Extra-Dry Solvents

Our extra-dry solvents provide excellent performance for moisture-sensitive applications and ship in septum-sealed bottles for extended use. Choose from three levels of extra-dry solvents for your moisture-sensitive applications:

- Standard: suitable for most applications
- Molecular sieves: stored over molecular sieves for prolonged shelf life
- Supreme: filtered to 0.2µm for dust-free applications

These solvents are packaged in AcroSeal tamper-evident bottles that feature an ergonomic top cap and a quadrant-style bottom cap for enhanced protection and easy access. We recommend using 18- to 21-gauge needles for optimum results.

- Large surface area reduces the force required for piercing with a syringe and allows room for multiple punctures
- Multi-layer septum retains physical integrity and reseals better than the previous generation
- Adhesive-free construction reduces the risk of contamination

Description	CAS No.	Level	Quantity	Cat. No.
1-Butanol, 99+%	71-36-3	Supreme	100mL, 1L	AC39896
1-Butanol, 99.4%	71-36-3	Standard	100mL	AC61025-1000
1-Chlorobutane, 99.5%	109-69-3	Supreme	100mL	AC43382-1000
			1L	AC43382-0010
1-Methyl-2-Pyrrolidinone, 99.5%	872-50-4	Standard	100mL	AC61041-1000
		Molecular Sieves	100mL, 1L, 2.5L	AC36438
		Supreme	100mL, 1L, 2.5L	AC32693
1-Octanol, 99%	111-87-5	Supreme	100mL, 1L	AC43458
1-Propanol, 99.5%	71-23-8	Supreme	100mL, 1L	AC39694
1,2-Dichlorobenzene, 98+%	95-50-1	Supreme	100mL, 1L	AC39696
1,2-Dichloroethane, 99.8%	107-06-2	Supreme	100mL, 1L, 2.5L	AC32684
1,3-Dioxolane, 99.8%, Stabilized with 75ppm BHT	646-06-0	Supreme	100mL, 1L	AC43156
1,4-Dioxane, 99.5%	123-91-1	Molecular Sieves	100mL, 1L, 2.5L	AC36434
1,4-Dioxane, 99.8%, Stabilized with 75ppm BHT	123-91-1	Standard	100mL, 1L, 100mL	AC61512
		Supreme	100mL, 1L, 2.5L	AC32689
2-Butatone, 99.5%	78-93-3	Supreme	100mL, 1L	AC39695
2-Methoxyethanol, 99+%	109-86-4	Supreme	100mL, 1L	AC39689
2-Methyl-1-Propanol, 99%	78-83-1	Supreme	100mL, 1L	AC39895
3-Methyl-1-Butanol, 99%	123-51-3	Supreme	100mL, 1L	AC43387
2-Methylbutane, 99%	78-78-4	Supreme	100mL, 1L	AC39722
2-Methyltetrahydrofuran, 99+%, Stabilized	96-47-9	Molecular Sieves	100mL, 1L	AC39663
		Supreme	100mL, 1L, 2.5L	AC39662
2-Methyltetrahydrofuran, 99+%, Stabilizer Free	96-47-9	Supreme	1L	AC39720-0010
2,2,4-Trimethylpentane, 99.5%	540-84-1	Supreme	100mL, 1L	AC32694
Acetone, 99.8%	67-64-1	Supreme	100mL, 1L	AC32680

Description	CAS No.	Level	Quantity	Cat. No.
Acetonitrile, 99.9%	75-05-8	Standard	100mL, 1L	AC1022
		Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC36431
		Supreme	100mL, 1L, 2.5L	AC32681
4 x 25mL	AC44839-1000			
Anisole, 99%	100-66-3	Supreme	100mL, 1L	AC42925
Benzyl Alcohol, 98+%	100-51-6	Supreme	100mL, 1L	AC39688
Bis(2-methoxyethyl) Ether, 99+%	111-96-6	Supreme	100mL, 1L	AC39896
Chlorobenzene, 99.8%	108-90-7	Supreme	100mL, 1L	AC39697
Chloroform, 99.9%, Stabilized	67-66-3	Standard	100mL	AC61029-1000
		Molecular Sieves	100mL, 1L	AC36432
		Supreme	100mL, 1L, 2.5L	AC32682
Cyclohexane, 99.5%	110-82-7	Standard	100mL	AC61029
		Molecular Sieves	100mL, 1L, 2.5L	AC36466
		Supreme	100mL, 1L, 2.5L	AC32683
Cyclopentane, 95+%	287-92-3	Supreme	100mL, 1L	AC39768
Cyclopentyl Methyl Ether, 99.5%, Stabilized	5614-37-9	Supreme	100mL, 1L	AC39725
Decahydronaphthalene, 99%, Mixture of Cis and Trans	91-17-8	Supreme	100mL, 1L	AC40617
Decane	124-18-5	Supreme	100mL, 1L	AC43460
Di-n-butyl Ether, 99+%	142-96-1	Supreme	100mL, 1L, 2.5L	AC39691
Dichloromethane, 99.9%, Stabilized	75-09-2	Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC34846
		Supreme	100mL, 1L, 2.5L	AC32685
			4 x 25mL	AC44837-1000
Dichloromethane, 99.9%	75-09-2	Standard	1L	AC61030-0010
Diethoxymethane, 99+%, Stabilized	462-95-3	Molecular Sieves	100mL	AC44305
Diethyl Ether, 99.5%, Stabilized	60-29-7	Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC36433
		Supreme	100mL, 1L, 2.5L	AC32686
			4 x 25mL	AC44842-1000
Dimethyl Carbonate, 99+%	616-38-6	Supreme	100mL, 1L	AC42873
Dodecane, 99%	112-40-3	Supreme	100mL, 1L	AC43459
Ethanol, 99.5% Absolute	64-17-5	Supreme	100mL, 1L, 2.5L	AC39769
Ethyl Acetate, 99.9%	141-78-6	Standard	100mL	AC61034
		Molecular Sieves	100mL, 1L, 2.5L	AC36435
		Supreme	100mL, 1L, 2.5L	AC32690
Ethylbenzene, 99.8%	100-41-4	Supreme	1000mL, 1L	AC43380
Ethylene Glycol Dimethyl Ether, 99%	110-71-4	Standard	100mL, 1L	AC61035
Ethyl Formate, 98+%	109-94-4	Supreme	100mL	AC42924-1000
Hexanes, 99.9%, Mixture of Isomers	92112-69-1	Standard	100mL, 1L	AC61037
Hexyl Alcohol, 99%	111-27-3	Supreme	100mL, 1L	AC43386
Isopropanol, 99.5%	67-63-0	Standard	100mL	AC61034-1000
		Molecular Sieves	100mL, 1L, 2.5L	AC36440

Description	CAS No.	Level	Quantity	Cat. No.
Isopropanol, 99.8%	67-63-0	Supreme	100mL, 1L, 2.5L	AC32696
m-Xylene, 99%	108-38-3	Standard	100mL	AC61047-1000
		Supreme	100mL, 1L	AC15893
Methanol, 99.8%	67-56-1	Standard	100mL, 1L	AC61098
		Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC36439
		Supreme	4 x 25mL	AC44841
Methanol, 99.9%	67-56-1	Supreme	100mL, 1L, 2.5L	AC32695
Methyl Acetate, 99+%	79-20-9	Supreme	100mL, 1L, 2.5L	AC37183
Methyl Sulfoxide, 99.7%	67-68-5	Standard	100mL, 1L	AC61042
		Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC34844
		Supreme	100mL, 1L, 2.5L	AC32688
Methyl Sulfoxide, 99.7%, Anhydrous	67-68-5	Standard	100mL	AC61097-1000
Methylcyclohexane, 98%	108-87-2	Supreme	100mL, 1L	AC39724
n-Butyl Acetate, 99+%	123-86-4	Supreme	100mL, 1L	AC42923
n-Heptane, 96+%	142-82-5	Standard	100mL	AC61036-1000
n-Heptane, 99+%	142-82-5	Molecular Sieves	100mL, 1L, 2.5L	AC36436
		Supreme	100mL, 1L	AC32691
n-Hexadecane	544-76-3	Supreme	100mL, 1L	AC43614
n-Hexane, 96+%	110-54-3	Supreme	100mL, 500mL, 1L, 2.5L	AC32692
n-Hexane 97%	110-54-3	Molecular Sieves	100mL, 1L	AC36437
n-Nonane, 99%	111-84-2	Supreme	100mL	AC43563
n-Octane	111-65-9	Supreme	100mL, 1L	AC39690
n-Pentane, 99+%	109-66-0	Supreme	100mL, 1L	AC39723
N,N-Dimethylacetamide, 99.5%	127-19-5	Molecular Sieves	100mL, 1L	AC37523
		Supreme	100mL, 1L, 2.5L	AC39635
N,N-Dimethylformamide, 99.8%	68-12-2	Standard	100mL, 1L	AC61032
		Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC34843
		Supreme	100mL, 1L, 2.5L	AC32687
4 x 25mL	AC44838-1000			
N,N-Dimethylacetamide, 99.8%	127-19-5	Standard	100mL	AC61031
o-Xylene	95-47-6	Supreme	100mL, 1L	AC44301
Petroleum Ether, <50ppm Water	64742-49-0	Supreme	100mL, 1L	AC39692
Pyridine, 99%	110-86-1	Standard	100mL	AC61099-1000
			1L	AC61044-0010
Pyridine, 99.5%	110-86-1	Molecular Sieves	100mL, 1L, 2.5L	AC36442
		Supreme	100mL, 1L, 2.5L	AC33942
Sec-Butanol, 99%	78-92-2	Standard	100mL, 1L	AC61026
tert-Butyl Methyl Ether, 99%	1634-04-4	Standard	100mL	AC61027-100
tert-Butyl Methyl Ether, 99+%	1634-04-4	Molecular Sieves	100mL, 1L	AC37522
		Supreme	100mL, 1L	AC37521
Tetrahydrofuran, 99.5%, Stabilized	109-99-9	Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC34845

Description	CAS No.	Level	Quantity	Cat. No.
Tetrahydrofuran, 99.85%, Stabilized	109-99-9	Supreme	100mL, 1L, 2.5L	AC32697
			4 x 25mL	AC44836-1000
Tetrahydrofuran, 99.9%	109-99-9	Standard	1L	AC61045-0010
Tetrahydrofuran, 99.9%, Stabilized	109-99-9	Standard	100mL	AC61091-1000
			1L	AC61090-0010
Toluene, 99.8%	108-88-3	Standard	100mL	AC61095-1000
			1L	AC61046-0010
Toluene, 99.85%	108-88-3	Molecular Sieves	100mL, 500mL, 1L, 2.5L	AC36441
		Supreme	100mL, 1L, 2.5L	AC32698
			4 x 25mL	AC44840-1000
Xylenes, 98+%, Mixed Isomers	1330-20-7	Supreme	100mL, 1L	AC39693

## Deuterated NMR Solvents

These high-quality deuterated chemicals fulfill your routine synthesis and structural analysis needs. Find solvents and standards with a variety of packaging options, isotopic enrichment, and tetramethylsilane (TMS) concentrations.

- Isotopic enrichment: From 99 atom % D for routine use to 99.97 atom % D for the most demanding applications
- TMS concentration: In addition to those without any internal standards, we offer a range of deuterated solvents that contain either 0.03% (v/v) or 1% (v/v) TMS internal standards
- Packaging options: Choose septum-sealed bottles, regular bottles, or ampules

Description	Grade	Packaging	Quantity	Cat. No.
1,1,2,2-Tetrachloroethane-d2	99 atom % D	Amber Glass Bottles	20mL	AC13358-0200
Acetic-d3 Acid-d	99.5 atom % D	Amber Glass Bottles	5mL	AC16621-0050
Acetone-d6	99.5 atom % D	Amber Glass Bottles	5mL	AC16621-0050
		Glass Ampules	10 x 0.75mL	AC32064-0075
	100 atom % D	Glass Ampules	10 x 0.75mL	AC32061-0075
Acetonitrile-d3	99.9 atom % D	Amber Glass Bottles	10mL	AC35139-0100
	99 atom % D	Amber Glass Bottles	50mL	AC16623-0500
	99.95 atom % D	Glass Ampules	10 x 0.75mL	AC32065-0075
Chloroform-d	99.8 atom % D	Amber Glass Bottles	100mL	AC16625-1000
		Amber Glass Bottles	100mL	AC16627-1000
		Glass Ampules	10 x 0.75mL	AC32068-0075
Chloroform-d with 0.03 v/v% TMS	99.8 atom % D	Amber Glass Bottles	100mL	AC20956-1000
Chloroform-d with 1 v/v% TMS	99.8 atom % D	Amber Glass Bottles	100mL	AC16626-1000
Deuterium Oxide	100 atom % D	Clear Glass Bottles	100mL	AC16631-1000
		Glass Ampules	10 x 0.75mL	AC32070-0075
Dichloromethane-d2	99.6+ atom % D	Clear Glass Bottles	25mL	AC17611-0250
	99.8 atom % D	Glass Ampules	10 x 0.75mL	AC32072-0075

Description	Grade	Packaging	Quantity	Cat. No.
Methanol-d4	99.5 atom % D	Clear Glass Bottles	50mL	AC16635-0500
	99.8 atom % D	Glass Ampules	10 x 0.75mL	AC32075-0075
	100 atom % D	Glass Ampules	10 x 0.75mL	AC35146-0075
Methanol-d4 with 0.03 v/v% TMS	99.8 atom % D	Clear Glass Bottles	50mL	AC32992-0500
		Glass Ampules	10 x 0.75mL	AC35147-0075
Methyl Sulfoxide-d6	99.9 atom % D	Clear Glass Bottles	100mL	AC16629-1000
		Glass Ampules	10 x 0.75mL	AC32077-0075
	100 atom % D	Glass Ampules	10 x 0.75mL	AC32076-0075
Methyl Sulfoxide with 0.03 v/v% TMS	99.9 atom % D	Glass Ampules	10 x 0.75mL	AC35254-0075
N,N-Dimethylformamide-d7	99.5 atom % D	Clear Glass Bottles	10mL	AC18360-0100
		Glass Ampules	10 x 0.75mL	AC32073-0075
Pyridine-d5	99.8 atom % D	Glass Ampules	10 x 0.75mL	AC35147-0075
Pyridine-d5 with 0.03 v/v% TMS	100 atom % D	Clear Glass Bottles	10mL	AC35149-0100
Tetrahydrofuran-d8	99.5 atom % D	Clear Glass Bottles	10mL	AC18013-0100
		Glass Ampules	10 x 0.75mL	AC32078-0075
Toluene-d8	99+ atom % D	Clear Glass Bottles	25mL	AC16639-0250
Trifluoroacetic Acid-d	99.5 atom % D	Clear Glass Bottles	25mL	AC32531-0250
		Glass Ampules	10 x 1mL	AC32533-0100
Tetramethylsilane, NMR Grade	99.9+%	Clear Glass Bottles	25g	AC13847-02500
		Clear Glass Bottles	100g	AC13847-1000

# Resources

## Description of Solvent Purity Grades

**Biotechnology:** Solvents and reagents specially purified and assayed for electrophoresis, molecular biology, sequencing, synthesis and other biotech applications.

**Certified:** Reagent chemicals that meet published maximum impurity; for general analytical procedures.

**Certified ACS:** Reagent chemicals that meet or exceed the latest ACS specifications for analytical applications with tight specifications.

**Certified ACS Plus:** Acids that meet or exceed the latest ACS specifications; tested for more than 16 metals; for analytical applications with metal specifications.

**Electronic:** Solvents processed to contain metal levels that meet Semiconductor Equipment and Materials Institute (SEMI) requirements; for electronic and circuit board manufacturing.

**Environmental:** Solvents that have been cleanroom packaged in pre-cleaned glass bottles; for HPLC, trace-organic analysis, and environmental testing.

**GC Headspace:** For volatile organic compound analysis.

**GC Resolv:** Solvent purity measured to parts-per-billion levels; meet ACS specifications and limits for the Contract Laboratory Program Target Compound List; for gas chromatography.

**Histology:** Solvents, reagents, and stains filtered and prepared for tissue processing, cytological, and histological use.

**HPLC:** Solvents processed and submicron filtered for HPLC and spectrophotometry use; meet ACS specifications.

**Laboratory, Technical, and Reagent:** Chemicals of reasonable purity; use for manufacturing and other general uses that have no official standard for quality or impurity levels.



**Multicompendial:** Reagent chemicals used in food, drug, and biological applications; meet or surpass specifications of the National Formulary (NF), Food Chemical Codex (FCC), United States Pharmacopeia (USP), European Pharmacopeia (EP), British Pharmacopeia (BP), and/or Japanese Pharmacopeia (JP).

**Optima:** Extremely high purity acids (to parts per trillion) and solvents (to parts per million) for HPLC, GC, plasma/ICP, spectrophotometry, and pesticide residue analysis; acids are analyzed by ICP/MS for more than 55 metals. (See Certificate of Analysis for actual lot specifications.)

**Optima LC/MS:** Solvents that meet purity requirements for LC/MS and UHPLC/UV testing in the pharmaceutical, biotechnology, clinical, environmental, and food safety industries; analyzed for 17 metals (to parts per billion) and for UV-absorbing contaminants (from 200 to 400nm); submicron filtered.

**Plasma:** Solvents for plasma/ICP, environmental testing, and trace-metal analysis; impurities in parts per trillion; packaged in acid-cleaned PE bottles.

**Scintanalyzed:** Solvents, fluors, and prepared mixtures for liquid scintillation counting.

**Spectranalyzed:** Solvents for UV-Vis spectrophotometric analysis; meet or exceed ACS specifications.

**TraceMetal:** Acids processed for parts-per-million to parts-per-billion levels of metal contamination; analyzed by ICP/MS for more than 55 metals. (See Certificate of Analysis for actual lot specifications.)

**UHPLC/MS:** Solvents for pharmaceutical, biotechnology, clinical, environmental, and food safety industries that meet tight specifications for signal-to-noise ratios, metal contamination, gradient suitability, and UV-absorbing contaminants; submicron filtered and packaged in borosilicate glass bottles.

# Chemical Resistance and Physical Properties of Plastics

Classes of Substances; Temperature 68°F (20°C)	ECTFE/ETFE	FEP/PTFE/PFA	FLPE	HDPE/XLPE	LDPE	NYL	PC	PETG	PK	PMMA	PMP	PP/PPCO	PS	PSF	PUR	PVC	PVDF	TPE <sup>2</sup>
Acids, Weak or Dilute	E	E	E	E	E	F	E	E	E	G	E	E	E	E	G	E	E	E
Acids <sup>1</sup> , Strong or Concentrated	G	E	E	E	E	N	N	N	G	N	E	E	F	G	F	E	E	F
Alcohols, Aliphatic	E	E	E	E	E	N	G	E	G	N	E	E	E	G	F	E	E	E
Aldehydes	E	E	G	G	G	F	F	N	E	G	G	G	N	F	G	N	E	N
Bases	E	E	F	E	E	F	N	N	G	F	E	E	E	E	N	E	E	E
Esters	E	E	E	G	G	E	N	N	E	N	G	G	N	N	N	N	G	N
Hydrocarbons, Aliphatic	E	E	E	G	F	E	F	E	E	G	F	G	N	G	E	E	E	N
Hydrocarbons, Aromatic	E	E	E	G	F	E	N	N	E	N	F	F	N	N	N	N	E	N
Hydrocarbons, Halogenated	E	E	G	F	N	G	N	N	E	N	N	F	N	N	N	N	N	N
Ketones	G	E	E	G	G	E	N	N	E	N	F	G	N	N	N	N	N	N
Oxidizing Agents, Strong	F	E	F	F	F	N	N	N	G	N	F	F	N	G	N	G	G	N

1. For oxidizing acids, see "Oxidizing Agents, Strong" in this table.

2. TPE gaskets

## Resin Codes

**ECTFE:** Ethylene-chlorotrifluoroethylene copolymer

**ETFE:** Ethylenetetrafluoroethylene

**FEP:** Fluorinated ethylene propylene

**FLPE:** Fluorinated high-density polyethylene

**FLPP:** Fluorinated polypropylene

**HDPE:** High-density polyethylene

**LDPE:** Low-density polyethylene

**NYL:** Nylon (polyamide)

**PPCO:** Polypropylene copolymer

**PC:** Polycarbonate

**PETG:** Polyethylene terephthalate copolyester

**PK:** Polyketone

**PFA:** Perfluoroalkoxy

**PMMA:** Polymethyl methacrylate

**PMP:** Polymethylpentene

**PP:** Polypropylene

**PS:** Polystyrene

**PSF:** Polysulfone

**PTFE:** Polytetrafluoroethylene

**PUR:** Polyurethane

**PVC:** Polyvinyl chloride

**PVDF:** Polyvinylidene fluoride

**TPE:** Thermoplastic elastomer

**XLPE:** Cross-linked high-density polyethylene

## Resistance Ratings

**E:** No damage after 30 days of constant exposure.

**G:** Little or no damage after 30 days of constant exposure.

**F:** Some effect after seven days of constant exposure. Depending on the plastic, the effect may be cracking, crazing, loss of strength, or discoloration. Solvents may cause softening, swelling, and permeation losses with PPCO, PP, PMP, LDPE, and HDPE; the solvent effects on these materials are normally reversible.

**N:** Not recommended for continuous use. Immediate damage may occur. Depending on the plastic, the effect will be severe cracking, crazing, loss of strength, discoloration, deformation, dissolution, or permeation loss.

## Warnings

Use only plastic labware made from FEP, PFA, or PTFE to store strong oxidizing agents; any other plastics will become brittle with prolonged exposure.

Do not place plastic labware directly in a flame or on a hotplate unless specifically instructed.

These charts are general guides only and contain recommendations, not guarantees. Test your materials under actual conditions before using them for your applications.

## Fisher Chemical Safety Spill Kits

Use the following symbols to identify chemicals that require special materials for spill cleanup and use that information to choose the right one-time-use kit for spills in your lab.



**Mercury warning:** This product contains mercury



**Acid Spills Emergency Cleanup Kit:** For neutralizing and absorbing up to 1L of acid (Cat. No. 18-061A)



**Caustic Spill Emergency Cleanup Kit:** For neutralizing and absorbing up to 1L of caustic material (Cat. No. 18-061C)



**Solvent Spill Emergency Cleanup Kit:** For neutralizing and absorbing up to 1L of solvent (Cat. No. 18-061B)



# Technical Solvents Chart

Solven	UV Cutoff (nm)	Boiling Point (°C)	Density (g/mL, 25°C)	Refractive Index (25°C)	Melting Point (°C)	Polarity Index (P)	Eluotropic Value on Silica (D°)	Viscosity (cP, 20°C)	Flash Point (°C)	Mol. Wt.
1-Butanol	215	117.7	0.8098	1.3972	-88.6	3.9	-	2.98	35	74.12
2-Propanol	205	82.3	0.7855	1.3772	-90.0	3.9	0.63	2.40	-12	60.10
Acetone	330	56.1	0.7857	1.3568	-94.3	5.1	0.53	0.36	20	58.08
Acetonitrile	190	81.6	0.7780	1.3415	-50.0	5.8	0.52	0.36	2	41.05
Chloroform	245	61.7	1.4840	1.4445	-63.3	4.1	0.26	0.58	None	119.38
Cyclohexane	202	80.7	0.7740	1.4247	-6.5	0.2	0.03	0.90	-20	84.16
Dimethyl Sulfoxide	262	189.0	1.1014	1.4783	18.5	7.2	-	2.24	87.8	78.13
Ethyl Acetate	255	77.1	0.8940	1.3695	-83.9	4.4	0.38	0.45	-4	88.11
Ethyl Ether	218	34.6	0.7134	1.3500	-116.3	2.8	0.43	0.24	-45	74.12
Glycerol	205	290.0	1.2613	1.4746	18.2	-	-		193	92.09
Heptane	197	98.4	0.6838	1.3855	-90.6	0.2	0.01	0.40	-4	100.20
Hexanes	195	69.0	0.6630	1.3759	-95.3	0.1	0.01	0.31	-23	86.18
Isooctane	205	99.2	0.6919	1.3895	109.5	0.1	0.01	0.50	28	114.23
Methanol	205	64.7	0.7915	1.3288	-97.8	5.1	0.73	0.55	12	32.04
Methylene Chloride	233	39.5	1.3180	1.4215	-96.7	3.1	0.32	0.30	N/A	84.93
N-Methylpyrrolidinone	275	202.2	1.03	1.469	-24.4	-	-	1.67	95	99.13
N,N-Dimethylformamide	268	153.0	0.9440	1.4280	-61.0	6.4	-	0.92	58	73.09
Pentane	190	36.1	0.6264	1.3555	-129.7	0.0	0.00	0.22	-49	72.15
Petroleum Ether	-	35-60	0.6400	1.3610	-	0.1	-	-	-18	-
Tetrahydrofuran	210	66.1	0.8892	1.4060	-108.3	4.0	0.35	0.55	-14	72.11
Toluene	285	110.6	0.8660	1.4940	-95.0	2.4	0.22	0.59	-4	92.14
Water	-	100.0	0.9982	1.3330	0.0	10.2	-	1.00	N/A	18.02

## Chemical Resistance of Labware Materials

### How to Use This Chart

Use this chart as a general guide only. Test each chemical first before storing in labware.

The first letter of each pair represents the resistance rating at 20°C; the second at 50°C.

**E:** No damage after 30 days of constant exposure.

**G:** Little or no damage after 30 days of constant exposure.

**F:** Some effect after seven days of constant exposure. Depending on the material, the effect may be cracking, crazing, loss of strength, or discoloration. Solvents may cause softening, swelling, and permeation losses with PA, PP, PMP, LDPE, and HDPE; the solvent effects on these materials are normally reversible.

**N:** Not recommended for continuous use. Immediate damage may occur. Depending on the material, the effect will be severe cracking, crazing, loss of strength, discoloration, deformation, dissolution, or permeation loss.

## Effects of Chemicals on Labware

Chemicals may affect the weight, strength, color, dimensions, flexibility, and surface appearance of labware. The interactions that cause these changes are:

- Chemical attack on the polymer chain: reduction in physical properties including oxidation, reaction of functional groups in or on the chain, and de-polymerization
- Physical changes: solvent absorption that causes plastic softening or swelling, solvent permeation, or dissolution in the solvent
- Stress cracks: from a “stress-cracking agent” and with molded-in or external stresses

The reaction of multiple classes of compounds produces synergistic or undesirable chemical effects. Other factors that affect chemical resistance include temperature, pressure, internal or external stresses (like centrifugation), length of exposure, and chemical concentration. As the temperature increases, plastics are more vulnerable to attack.

## Warnings

Use only plastic labware made from FEP, PFA, or PTFE to store strong oxidizing agents; any other plastics will become brittle with prolonged exposure.

The plastic resin information in these tables was provided by the Thermo Scientific team and is reprinted with permission. Use it only as a guide for selecting labware.

Before putting labware into service, test it for 72 hours under the expected or proposed conditions to help avoid injury or property damage.

The information in these tables may be inaccurate or incomplete, and some materials may not be suitable for a specific purpose.

Chemicals	LDPE	HDPE	PP/PCO	PMP	FEP/PTFE/PFA	ECTFE/ETFE	PC	PVC	PSF	PVDF	PS	NYL	Stainless Steel	Glass	Ceramic
1,4-Dioxane	GF	GG	GF	GF	EE	EF	GF	FN	GF	NN	NN	EF	GG	EE	EE
Acetaldehyde	GN	GF	GN	GN	EE	GF	FN	GN	NN	EE	NN	EG	EE	EE	EE
Acetamide, Sat.	EE	EE	EE	EE	EE	EE	NN	NN	NN	-	EE	EE	EE	EE	EE
Acetic Acid, 5%	EE	EE	EE	EE	EE	EE	EG	EE	EE	EE	EG	FN	EE	EE	EE
Acetic Acid, 50%	EE	EE	EE	EE	EE	EG	EG	EG	GG	EE	GG	NN	EE	EE	EE
Acetone	NN	NN	EE	EE	EE	GF	NN	NN	NN	NN	NN	EE	EE	EE	EE
Acetonitrile	EE	EE	FN	FN	EE	EE	NN	NN	NN	EE	NN	EE	EG	EE	EE
Acrylonitrile	EE	EE	FN	FN	EE	EG	NN	NN	NN	GF	NN	EG	EG	EE	EE
Adipic Acid	EG	EE	EE	EE	EE	EE	EE	EG	GG	-	EE	EF	EG	EE	EE
Alanine	EE	EE	EE	EE	EE	EE	NN	NN	NN	-	EE	EG	-	-	-
Allyl Alcohol	EE	EE	EE	EG	EE	EE	GF	GF	GF	-	GF	NN	EE	EG	EG
Aluminum Hydroxide	EG	EE	EG	EG	EE	EE	FN	EG	GG	EE	GG	EE	EE	NN	EE
Aluminum Salts	EE	EE	EE	EE	EE	EE	EG	EE	EE	EE	GG	NN	GG	EE	EE
Amino Acids	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EG	-	-	-
Ammonia	EE	EE	EE	EE	EE	EE	NN	EG	GF	EE	GF	FF	EE	EE	EE
Ammonium Acetate, Sat.	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EG	EG	EE	EE
Ammonium Glycolate	EG	EE	EG	EG	EE	EE	GF	EE	GG	EE	EE	GG	-	-	-

Chemicals	LDPE	HDPE	PP/PCO	PMP	FEP/PTFE/PFA	ECTFE/ETFE	PC	PVC	PSF	PVDF	PS	NYL	Stainless Steel	Glass	Ceramic
Ammonium Hydroxide, 5%	EE	EE	EE	EE	EE	EE	FN	EE	GG	EE	EF	GF	EE	EE	EE
Ammonium Hydroxide, 30%	EG	EE	EG	EG	EE	EE	NN	EG	GG	EE	GF	FN	EE	EE	EE
Ammonium Oxalate	EG	EE	EG	EG	EE	EE	EE	EE	EE	EE	EE	GF	EE	EE	EE
Ammonium Salts	EE	EE	EE	EE	EE	EE	EG	EG	EE	EE	GG	NN	EE	EE	EE
Amyl Chloride	NN	FN	NN	NN	EE	EE	NN	NN	NN	EE	NN	EG	EG	EE	EE
Aniline	EG	EG	GF	GF	EE	GN	FN	NN	NN	EF	NN	GF	EG	EE	EE
Benzaldehyde	EG	EE	EG	EG	EE	EF	FN	NN	FF	EE	NN	EG	GG	EE	EE
Benzene	FN	NN	GF	GF	EE	EG	NN	NN	NN	EE	NN	EE	GG	EE	EE
Benzoic Acid, Sat.	EE	EE	EG	EG	EE	EE	EG	EG	FF	EE	GG	NN	EG	EE	EE
Benzyl Acetate	EG	EE	EG	EG	EE	EG	FN	NN	NN	-	NN	EG	GG	EE	EE
Benzyl Alcohol	NN	FN	NN	NN	EE	EE	NN	GF	NN	EE	NN	NN	GG	EE	EE
Bromine	NN	FN	NN	NN	EE	EG	FN	GN	NN	EE	NN	NN	EE	EG	GG
Bromobenzene	NN	FN	NN	NN	EE	GN	NN	NN	NN	EE	NN	EG	GG	GG	GG
Bromoform	NN	NN	NN	NN	EE	GF	NN	NN	NN	EE	NN	FF	GG	EE	EE
Butadiene	NN	FN	NN	NN	EE	EE	NN	FN	NN	EE	NN	FF	GG	EE	EE
Butyric Acid	NN	FN	NN	NN	EE	EE	FN	GN	GG	EE	NN	FN	GG	EE	EE
Calcium Hydroxide, Conc.	EE	EE	EE	EE	EE	EE	NN	EE	GG	EE	GG	NN	GG	NN	EE
Calcium Hypochlorite, Sat.	EE	EE	EE	EH	EE	EE	FN	GF	EE	EE	GF	NN	EE	EE	EE
Carbazole	EE	EE	EE	EE	EE	EE	NN	NN	NN	-	EE	EE	-	-	-
Carbon Disulfide	NN	NN	NN	NN	EE	EF	NN	NN	NN	EE	NN	EG	EE	EE	EE
Carbon Tetrachloride	FN	GF	GF	NN	EE	EE	NN	GF	NN	EE	NN	EE	GG	EE	EE
Cedarwood Oil	NN	FN	NN	NN	EE	EG	GF	FN	FF	EE	NN	EG	-	-	-
Cellosolve Acetate	EG	EE	EG	EG	EE	EG	FN	FN	NN	EG	NN	EE	GG	EE	EE
Chlorine, 10% in Air	GN	EF	GN	GN	EE	EE	EG	EE	NN	EE	FN	NN	FF	EE	EE
Chlorine, 10% (Moist)	GN	GF	FN	GN	EE	EE	GF	EG	NN	EE	NN	NN	FF	EE	EE
Chloroacetic Acid	EE	EE	EG	EG	EE	EE	FN	FN	NN	E-	GN	NN	GG	EE	EE
Chloroform	FN	FN	GF	NN	EE	GF	NN	NN	NN	EE	NN	FF	EE	EE	EE
Chromic Acid, 10%	EE	EE	EE	EE	EE	EE	GF	EG	NN	EE	EE	NN	GG	EE	EE
Chromic Acid, 50%	EE	EE	GF	GF	EE	EE	FN	EF	NN	EG	FF	NN	FF	EE	NN
Cinnamon Oil	NN	FN	NN	NN	EE	EG	GF	NN	FF	-	NN	GF	EE	-	-
Citric Acid, 10%	EE	EE	EE	EE	EE	EE	EG	GG	EE	EE	EG	NN	GG	EE	EE
Cresol	NN	FN	GF	NN	EE	EG	NN	NN	NN	EE	NN	NN	EE	EE	EE
Cyclohexane	FN	FN	FN	NN	EE	EG	EG	GF	NN	EE	NN	EE	EE	EE	EE
Decalin	GF	EG	GF	FN	EE	EE	NN	EG	NN	-	NN	EE	-	-	-
Diethyl Benzene	NN	FN	NN	NN	EE	EG	FN	NN	NN	-	NN	EE	GG	EE	EE
Diethyl Ether	NN	FN	NN	NN	EE	EG	NN	FN	NN	EG	NN	EE	GG	EE	EE
Diethyl Ketone	NN	NN	GG	GF	EE	GF	NN	NN	NN	NN	NN	EE	GG	EE	EE
Diethyl Malonate	EE	EE	EE	EG	EE	EE	FN	GN	FF	EG	NN	EE	-	-	-
Diethylene Glycol	EE	EE	EE	EE	EE	EE	GF	FN	GG	EE	GG	EE	EE	EE	EE
Diethylene Glycol Ethyl Ether	EE	EE	EE	EE	EE	EE	FN	FN	FF	-	NN	EE	EE	EE	EE
Dimethyl Formamide	EE	EE	EE	EE	EE	GG	NN	FN	NN	NN	NN	GF	EE	EE	EE
Dimethylsulfoxide	EE	EE	EE	EE	EE	EG	NN	NN	NN	-	EG	EE	EE	EE	EE



Chemicals	LDPE	HDPE	PP/PCO	PMP	FEP/PTFE/PFA	ECTFE/ETFE	PC	PVC	PSF	PVDF	PS	NYL	Stainless Steel	Glass	Ceramic
Dipropylene Glycol	EE	EE	EE	EE	EE	EE	GF	GF	GG	-	EE	EE	-	-	-
Ether	NN	FN	NN	NN	EE	EG	NN	FN	NN	EG	NN	EE	EE	EE	EE
Ethyl Acetate	EE	EE	EE	FN	EE	EE	NN	NN	NN	NN	NN	EE	GG	EE	EE
Ethyl Alcohol, Absolute	EG	EE	EG	EG	EE	EE	EG	EG	EG	EE	FN	NN	EE	EE	EE
Ethyl Alcohol, 40%	EG	EE	EG	EG	EE	EE	EG	EE	EG	EE	GF	NN	EE	EE	EE
Ethyl Benzene	FN	GF	FN	FN	EE	GF	NN	NN	NN	-	NN	EE	GG	-	-
Ethyl Benzoate	FF	GG	GF	GF	EE	EG	NN	NN	NN	NN	NN	EE	-	-	-
Ethyl Butyrate	GN	GF	GN	FN	EE	EG	NN	NN	NN	NN	NN	EE	EG	-	-
Ethyl Chloride, Liquid	FN	FF	FN	FN	EE	EE	NN	NN	NN	EE	NN	GF	EE	EE	EE
Ethyl Cyanoacetate	EE	EE	EE	EE	EE	EE	FN	FN	FF	NN	GN	GF	-	-	-
Ethyl Lactate	EE	EE	EE	EE	EE	EE	FN	FN	FF	NN	FN	EG	-	-	-
Ethylene Chloride	GN	GF	FN	NN	EE	EE	NN	NN	NN	EE	NN	EG	GG	EE	EE
Ethylene Glycol	EE	EE	EE	EE	EE	EE	GF	EE	EE	EE	EE	EE	GG	EE	EE
Ethylene Glycol Methyl Ether	EE	EE	EE	EE	EE	EE	FN	FN	FF	-	NN	EE	-	-	-
Ethylene Oxide	FF	GF	FF	FN	EE	EE	FN	FN	EE	EE	NN	EE	GG	EE	EE
Fluorides	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GG	EE	-	-	-
Fluorine	FN	GN	FN	FN	EG	EF	GF	EG	NN	-	NN	NN	EG	EE	-
Formaldehyde, 10%	EE	EE	EE	EG	EE	EE	EG	GF	GF	EE	FN	GF	EE	EE	EE
Formaldehyde, 40%	EG	EE	EG	EG	EE	EE	EG	GF	GF	EE	NN	GF	EE	EE	EE
Formic Acid, 3%	EG	EE	EG	EG	EE	EE	EG	GF	GG	EE	EG	NN	GG	EE	EE
Formic Acid, 50%	EG	EE	EG	EG	EE	EE	EG	GF	GG	EE	FF	NN	GG	EE	EE
Formic Acid, 98 to 100%	EG	EE	EG	EF	EE	EE	EF	FN	FF	EE	FF	NN	GG	EE	EE
Freon TF	EG	EG	EG	FN	EE	EG	GF	GF	EG	EE	FN	-	EE	EE	EE
Fuel Oil	FN	GF	EG	GF	EE	EE	EG	EE	EG	EE	NN	EE	EE	EE	EE
Gasoline	FN	GG	GF	GF	EE	EE	FF	GN	FF	EE	NN	EE	EE	EE	EE
Glacial Acetic Acid	EG	EE	EG	EG	EE	EE	NN	EG	FN	EG	NN	NN	EG	EE	EE
Glycerine	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
n-Heptane	FN	GF	FF	FF	EE	EE	EG	GF	EG	EE	NN	EE	EE	EE	EE
Hexane	NN	GF	GF	FN	EE	EE	FN	GN	EG	EE	NN	EE	EE	EE	EE
Hydrochloric Acid, 1 to 5%	EE	EE	EE	EG	EE	EE	EE	EE	EE	EE	EE	NN	NN	EE	EE
Hydrochloric Acid, 20%	EE	EE	EE	EG	EE	EE	GF	EG	EE	EE	EE	NN	NN	EE	EE
Hydrochloric Acid, 35%	EE	EE	EG	EG	EE	EE	NN	GF	EE	EE	FF	NN	NN	EE	EE
Hydrochloric Acid, 4%	EG	EE	EG	EG	EE	EE	GF	GF	GF	EE	GF	NN	NN	NN	-
Hydrofluoric Acid, 48%	EE	EE	EE	EE	EE	EE	NN	GF	FN	EE	NN	NN	NN	NN	NN
Hydrogen Peroxide, 3%	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EG	NN	GG	EE	EG
Hydrogen Peroxide, 30%	EG	EE	EG	EG	EE	EE	EE	EE	EE	EE	EG	NN	GG	EE	EG
Hydrogen Peroxide, 90%	EG	EE	EG	EG	EE	EE	EE	EG	EE	E-	EG	NN	GG	EE	EG
Isobutyl Alcohol	EE	EE	EE	EG	EE	EE	EG	EG	EG	EE	GG	NN	EE	EE	EE
Isopropyl Acetate	GF	EG	GF	GF	EE	EG	NN	NN	NN	-	NN	EE	GG	EE	EE
Isopropyl Alcohol	EE	EE	EE	EE	EE	EE	EE	EG	EE	EE	EG	NN	GG	EE	EE
Isopropyl Benzene	FN	GF	FN	NN	EE	EG	NN	NN	NN	-	NN	EG	-	-	-
Kerosene	FN	GG	GF	GF	EE	GF	EE	EE	GF	EE	NN	EE	EE	EE	EE

Chemicals	LDPE	HDPE	PP/PCO	PMP	FEP/PTFE/PFA	ECTFE/ETFE	PC	PVC	PSF	PVDF	PS	NYL	Stainless Steel	Glass	Ceramic
Lactic Acid, 3%	EG	EE	EG	EG	EE	EE	EG	GF	EE	EG	GG	NN	GG	EE	EE
Lactic Acid, 85%	EE	EE	EG	EG	EE	EG	EG	GF	EE	GF	GG	NN	GG	EE	EE
Methoxyethyl Oleate	EG	EE	EG	EG	EE	EE	FN	NN	NN	-	NN	EG	-	-	-
Methyl Alcohol	EE	EE	EE	EE	EE	EE	GF	EF	GF	EE	FN	NN	EE	EE	EE
Methyl Ethyl Ketone	NN	NN	EG	NN	EE	GF	NN	NN	NN	NN	NN	EE	EE	EE	EE
Methyl Isobutyl Ketone	NN	NN	GF	FF	EE	GF	NN	NN	NN	GN	NN	EE	GG	EE	EE
Methyl Propyl Ketone	GF	EG	GF	FF	EE	EG	NN	NN	NN	NN	NN	EE	EE	-	-
Methylene Chloride	FN	FN	FN	FN	EE	GG	NN	NN	NN	NN	NN	GF	GG	EE	EE
Mineral Oil	GN	EE	EE	EG	EE	EE	EG	EG	EE	EE	EE	EE	EE	EE	EE
Nitric Acid, 1 to 10%	EE	EE	EE	EE	EE	EE	EG	EG	EF	EE	GN	NN	EE	EE	EE
Nitric Acid, 50%	GN	GN	FN	GN	EE	EE	GF	GF	GF	EG	NN	NN	EG	EG	NN
Nitric Acid, 70%	FN	GN	NN	GF	EE	EE	NN	FN	NN	GF	NN	NN	GG	EE	NN
Nitrobenzene	NN	FN	NN	NN	EE	EG	NN	NN	NN	EN	NN	FF	GG	EE	EE
n-Amyl Acetate	GF	EG	GF	GF	EE	EE	NN	NN	NN	EE	NN	EE	EE	EE	EG
n-Butyl Acetate	GF	EG	GF	GF	EE	EG	NN	NN	NN	EE	NN	EE	GG	EE	EE
n-Butyl Alcohol	EE	EE	EE	EG	EE	EE	GF	GF	GF	EE	EG	NN	EE	EE	EE
n-Octane	EE	EE	EE	EE	EE	EE	GF	FN	GF	EE	NN	EE	EE	EE	EE
o-Dichlorobenzene	FN	FF	FN	FN	EE	EF	NN	NN	NN	EE	NN	EG	GG	EE	EE
Orange Oil	FN	GF	GF	FF	EE	EE	FF	FN	FF	EE	NN	GF	EE	EE	EE
Ozone	EG	EE	EG	EE	EE	EE	EG	EG	EE	EE	FF	EG	EG	-	-
p-Chloroacetophenone	EE	EE	EE	EE	EE	EE	NN	NN	NN	-	NN	EG	-	-	-
p-Dichlorobenzene	FN	GF	GF	GF	EE	EF	NN	NN	NN	EE	NN	EG	GG	EE	EE
Perchloric Acid	GN	GN	GN	GN	GF	EG	NN	GN	NN	EE	GF	NN	FF	EE	EE
Perchloroethylene	NN	NN	NN	NN	EE	EE	NN	NN	NN	EE	NN	EE	EG	EE	EE
Phenol, Crystals	GN	GF	GN	FG	EE	EE	NN	FN	FF	EE	NN	NN	GG	EE	EE
Phosphoric Acid, 1 to 5%	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GG	NN	NN	EE	EE
Phosphoric Acid, 85%	EE	EE	EG	EG	EE	EE	EG	EG	EE	EE	EG	NN	NN	EE	EE
Pine Oil	GN	EG	EG	GF	EE	EG	GF	DN	FF	EE	NN	GF	EE	-	-
Potassium Hydroxide, 1%	EE	EE	EE	EE	EE	EE	FN	EE	EE	EE	GG	FF	EG	GF	GF
Potassium Hydroxide, Conc.	EE	EE	EE	EE	EE	EE	NN	EG	EE	EG	GG	FF	EG	NN	NN
Propane Gas	NN	FN	NN	NN	EE	EE	FN	EG	FF	EE	NN	FF	GF	NN	NN
Polypropylene Glycol	EE	EE	EE	EE	EE	EE	GF	FN	GG	-	EE	EE	GG	EE	EE
Propylene Oxide	EG	EE	EG	EG	EE	FN	GF	FN	GG	FN	NN	EE	EE	-	-
Resorcinol, Sat.	EE	EE	EE	EE	EE	EE	GF	FN	NN	-	GF	NN	-	-	-
Resorcinol, 5%	EE	EE	EE	EE	EE	EF	GF	GN	NN	-	GF	NN	-	-	-
Salicylaldehyde	EG	EE	EG	EG	EE	EN	GF	FN	FF	EG	NN	EG	-	-	-
Salicylic Acid, Powder	EE	EE	EE	EG	EE	EE	EG	GF	EE	EE	EE	EG	GG	EE	EE
Salicylic Acid, Sat.	EE	EE	EE	EE	EE	EE	EG	GF	EE	EE	EG	NN	GG	EE	EE
Salt Solutions, Metallic	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GG	FF	EG	-	-
sec-Butyl Alcohol	EG	EE	EG	EG	EE	EE	GF	GG	GF	EE	GG	NN	EE	EE	EE
Silver Acetate	EE	EE	EE	EE	EE	EE	EG	GG	EE	EE	GG	EF	-	-	-
Silver Nitrate	EG	EE	EG	EE	EE	EE	EE	EG	EE	EE	GF	NN	GG	EE	EE

Chemicals	LDPE	HDPE	PP/PCO	PMP	FEP/PTFE/PFA	ECTFE/ETFE	PC	PVC	PSF	PVDF	PS	NYL	Stainless Steel	Glass	Ceramic
Sodium Acetate, Sat.	EE	EE	EE	EE	EE	EE	EG	GF	EE	EE	GG	FF	GG	EE	EE
Sodium Hydroxide, 1%	EE	EE	EE	EE	EE	EE	FN	EE	EE	EE	GG	EE	GG	GE	GE
Sodium Hydroxide, 50% to Sat.	GG	EE	EE	EE	EE	EE	NN	NN	EG	EG	EE	GF	GF	NN	NN
Sodium Hypochlorite, 15%	EE	EE	GF	EE	EE	EE	GF	EE	EE	EE	EE	NN	NN	EE	EG
Stearic Acid, Crystals	EE	EE	EE	EE	EE	EE	EG	EG	GG	EE	EG	EF	EG	EE	EE
Sulfuric Acid, 1 to 6%	EE	EE	EE	EE	EE	EE	EE	EG	EE	EE	EG	NN	FN	EE	EG
Sulfuric Acid, 20%	EE	EE	EG	EG	EE	EE	EG	EG	EE	EE	EG	NN	NN	EE	GG
Sulfuric Acid, 60%	EG	EE	EG	EG	EE	EE	GF	EG	EE	EE	GN	NN	NN	EE	NN
Sulfuric Acid, 98%	GG	GG	FN	GG	EE	EE	NN	GN	NN	EG	NN	NN	NN	EE	NN
Sulfur Dioxide, Liq., 46psi	NN	FN	NN	NN	EE	EG	GN	FN	GG	EE	NN	NN	FN	NN	NN
Sulfur Dioxide, Wet or Dry	EE	EE	EE	EE	EE	EE	EG	EG	GG	GE	FN	NN	FN	EE	EE
Sulfur Salts	FN	GF	FN	FN	EE	EG	FN	NN	GG	GF	NN	NN	-	-	-
Tartaric Acid	EE	EE	EE	EE	EE	EE	EG	EG	EE	EE	GG	EF	FF	EE	EE
tert-Butyl Alcohol	EG	EE	EG	EG	EE	EE	GF	EG	GF	EE	EE	NN	EE	EE	EE
Tetrahydrofuran	FN	GF	GF	FF	EE	GF	NN	NN	NN	FN	NN	EE	EE	EE	EE
Thionyl Chloride	NN	NN	NN	NN	EE	EE	NN	NN	NN	-	NN	NN	NN	EE	EE
Toluene	FN	GG	GF	FF	EE	EE	FN	NN	NN	EE	NN	EE	EE	EE	EE
Tributyl Citrate	GF	EG	GF	GF	EE	EG	NN	FN	FF	EF	NN	EG	-	-	-
Trichloroethane	NN	FN	NN	NN	EG	NN	NN	NN	NN	-	NN	EE	GG	EE	EE
Trichloroethylene	NN	FN	NN	NN	EE	EG	NN	NN	NN	EE	NN	EE	GG	EE	EE
Triethylene Glycol	EE	EE	EE	EE	EE	EE	EG	GF	EE	-	EG	EE	-	-	-
Tripropylene Glycol	EE	EE	EE	EE	EE	EE	EG	GF	EE	-	EE	EE	-	-	-
Turpentine	FN	GG	GF	FF	EE	EE	FN	GF	NN	EE	NN	EE	EE	EE	EE
Undecyl Alcohol	EF	EG	EG	EG	EE	EG	GF	EF	FF	EE	GG	EE	-	-	-
Urea	EE	EE	EE	EG	EE	EE	NN	GN	FF	EE	EG	EE	GG	EE	EE
Vinylidene Chloride	NN	FN	NN	NN	EE	GF	NN	NN	NN	EE	NN	NN	GG	-	-
Xylene	GN	GF	FN	FN	EE	EG	NN	NN	NN	EE	NN	EE	GG	EE	EE
Zinc Stearate	EE	EE	EE	EE	EE	EE	EE	EG	EE	EE	EE	EE	EE	EE	EE

# Thermo Scientific Consumables

Even the best solvents cannot correct issues generated from selecting the wrong consumable for your chromatography workflow. With high-quality Thermo Scientific glass vials and caps, you can be sure your sample will not be affected by adsorption or leachates. Our comprehensive line of sample preparation products, paired with UHPLC and GC columns, enable you to solve your chromatographic challenges. No matter what application you're running, Thermo Scientific is your partner in delivering robust, high-resolution separations, providing the analytical confidence you desire.



## Find All the Consumable Products You Need to Support Your Chromatography Workflow



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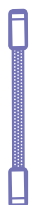
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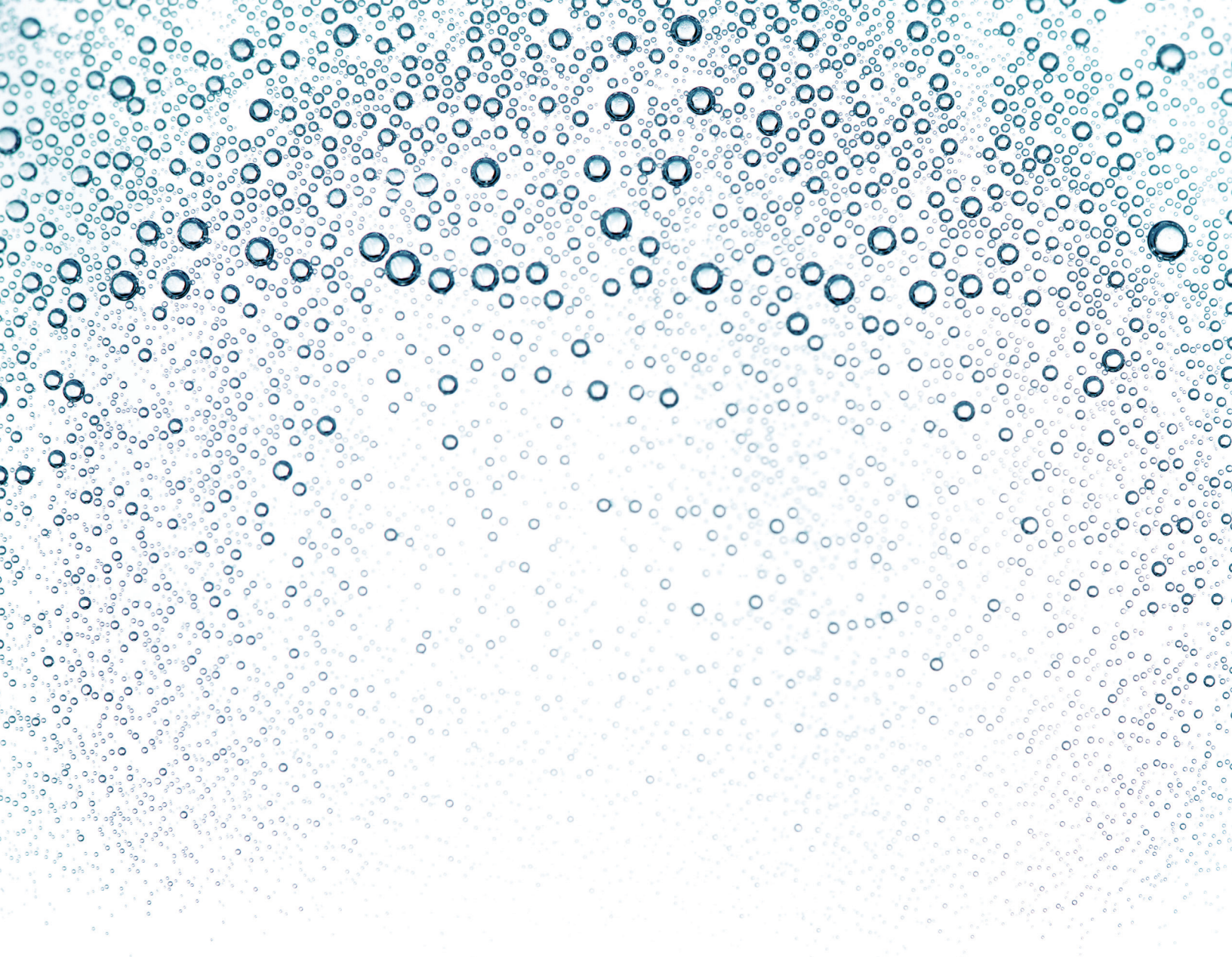


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