# Solvents Application Guide

Products | Packaging | Delivery Systems



Not All Solvents Are Created Equal



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### **Specialized Chemical Services**

Save time and resources with our tailored chemical solutions and services for research to scale-up development and production. We offer bulk and semi-bulk quantities, solvent blending, additional testing/enhanced documentation, labeling, packaging and special instructions based on your needs.







Fisher BioReagents™



Fisher Chemical **Fisher Chemical High-Purity Solvents** 

## **Pushing the Limits of Detection Further** *in the past, present, and future...*

Ever since the creation of Fisher's Chemical index near the start of the 20th century, we've been meeting the science community's chemical needs for research applications. With years of experience and a team of highly knowledgeable and dedicated people, the Fisher Chemical<sup>™</sup> brand brings you the highest level of customer service, technical assistance, and fast, accurate delivery.



## Each Batch of Certified Reagents is Analyzed

1952 Fisher Chemical plant in NJ

The Fisher Chemical portfolio of high-purity solvents comprises more than 800 solvents suited to a wide range of laboratory applications, from LC/MS to HPLC to gas chromatography to spectrophotometry.

**Next-Generation Reagents:** As instrumentation evolves, new lines of solvents are being developed so researchers can amplify productivity with improved detection of impurities and interference-free baselines.

Manufactured in ISO 9001 certified facilities, each Fisher Chemical solvent undergoes rigorous quality assurance and testing measures that ensure excellent lot-to-lot and bottle-to-bottle consistency.

## Not All Solvents Are Created Equal



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## **One-Stop Solution for All Your Chemical Needs:** fishersci.com/chemicals

Visit our NEW page today for: NEW Products! NEW Promotions! NEW Chemical Resource Center!

- Advanced substructure search
- Key charts, symbols and conversions to reference
- Safety information
- Videos, whitepapers and guides

## fishersci.com/ChemicalResource



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## **Questions about our chemicals?**

Our devoted Technical Services team has an average of 25 years of experience and is ready to assist you with questions regarding technical inquiries about our chemicals and their applications.

Call: **1-800-227-6701**, press option 2, 8 a.m. - 6 p.m. ET, Monday through Friday Email: **Chem.Techinfo@thermofisher.com** 

Place your order today!

Resources

## **Excellence in Packaging through Innovation**

Fisher Chemical<sup>™</sup> products come in a variety of innovative packaging options designed for safety, environmental protection, convenient handling and storage, and preservation of product integrity. Our packaging is compliant with all government regulations.



### Safety. Reliability. Quality. Convenience.

### **Plastic Bottles**

Available when chemical properties are compatible to minimize the risk of breakage, provide lighter weight packaging and easier, more economical shipping.

### **Amber Glass Bottles**

Used to package photosensitive chemicals to protect them from light. Our Safe-Cote option keeps the product and researcher safe if the bottle breaks.

### **Borosilicate Glass Bottles**

Significantly reduces contamination of metal cations (Na+ and K+) compared to soda-lime glass.

### **High-Volume Solvent Delivery Systems**

We offer environmentally friendly solvent handling solutions for virtually unlimited applications, enhancing safety and improving productivity within your lab.

### **Aluminum Cans**

With a lightweight, seamless construction that is designed to contain ethers, this option features a tamper-evident cap with pouring handle. They are pure aluminum, which minimizes Na+ and K+ adduct formation.

### Resources

## Safer, Smarter, Eco-Friendly Packaging

Many of your favorite chemicals, including Safe-Cote<sup>™</sup> glass bottles, are delivered in (Styrofoam<sup>™</sup> free) EcoSafPak<sup>™</sup>packaging manufactured by an SFI-certified manufacturer, including:

- 500mL bottles (single, 2-packs or cases of 6)
- 1L bottles
- 2 × 1L bottles
- 6 × 1L bottles
- 2.5L bottles
- 4L bottles (1, 2 or 4-packs)
- 2 × 4L bottles
- 4 × 4L bottles



FIBER USED IN THIS PRODUCT LINE MEETS THE SOURCING REQUIREMENTS OF THE SFI PROGRAM WWW.SFIPROGRAM.ORG

The EcoSafPak is manufactured by an SFI-certified manufacturer.

#### The Sustainable Forestry Initiative<sup>™</sup> (SFI) program:

- Based on the premise that responsible environmental behavior and sound business decisions can co-exist
- A comprehensive system of principles, objectives, and performance measures developed by professional foresters, conservationists, and scientists
- Promotes the perpetual growth and harvest of trees with the long-term protection of wildlife, plants, soil, and water

### SFI's Nine Objectives:

- Sustainable forestry
- Responsible practices
- Reforestation and productive capacity
- Forest health and productivity
- Long-term forest and soil productivity
- Protection of water resources
- Protection of special sites and biological diversity
- Legal compliance
- Continual improvement

EcoSafPak packaging minimizes the use of non-recyclable material through the use of the revolutionary Hexacomb design inserts.

#### The Hexacomb is:

- Fully recyclable
- Sturdy and durable
- Versatile

#### Improved safety and handling:

 EcoSafPak is the only package of its kind to pass the most demanding ISTA (International Safe Transport Association) "3A" test, consisting of:

18Pak

- 17 drops to simulate real-world parcel shipment handling
- Shock testing
- Vibration testing
- Corrugated material is shock absorbing
- Greater stability in the frame of the box
- Staggered handholds for ease of transport

Place your order today!

Resources

## FisherLOCK Closures

### Lock in Quality and Safety

Fisher Chemical<sup>™</sup> and Fisher BioReagents<sup>™</sup> FisherLOCK caps place a patented tamper-evident secure seal applied during manufacturing to our amber glass bottles that holds the bottle's lips and preserves integrity of the chemical.

- Easy release: The outer shell of the cap is designed to make it effortless to open and readily reseal
- The tamper-evident interior ring is visible from various angles and offers resistance until the bottle is initially opened, ensuring product integrity without the drawbacks and complications of plastic seals
- Color-coded bands at the bottom of the cap match ChemAlert storage codes for easy hazard identification



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**Red (R):** Flammable. Store in area segregated for flammable reagents.

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**Blue (B):** Health hazard. Toxic if inhaled, ingested or absorbed through skin. Store in secure area.

ChanAlontii STORMOR yellow Yellow (Y): Reactive and oxidizing reagents. 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 red-, yellow- and blue-coded reagents.



Gray (G): Presents no more than moderate hazard in any of the categories above. For general chemical storage.

**EXCEPTION:** Reagent incompatible with other reagents of the same color bar. Store separately.

### The FisherLOCK Cap LOCKS IN quality, safety, reliability and convenience:

#### Quality

- Provides a tight, tamper-evident, secure seal
- Eliminates polyethylene glycol contamination that can occur with a plastic overseal

### Safety

- Caps are designed to resist back-off during transport, reducing risk of leakage
- Color-coded rings indicate storage requirements and hazard categories and enhance proper recognition, handling and storage — even before the bottle is removed from the case

#### Reliability

- · Rigorously tested for chemical compatibility
- Bottle threads are unchanged, allowing attachment of the opened bottle to standard equipment

#### Convenience

- Cap design facilitates correct initial torque application during manufacturing, thus eliminating caps that may be hard to open
- Larger ridges on the exterior of the cap make it easier to open
- Caps readily reseal after initial opening

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## **Fisher Chemical Safe-Cote Bottles – Safely Serving Science** Protecting the Researcher and Preserving Product Integrity

Description	Purity Grade	Size	Cat. No.
1-Butanol	HPLC/ACS	1L	A383SK-1
1-Butanol	HPLC/ACS	4L	A383SK-4
2-Propanol	Certified ACS Plus	4L	A416SK-4
2-Propanol	HPLC/ACS	1L	A451SK-1
2-Propanol	HPLC/ACS	4L	A451SK-4
2-Propanol	Optima	4L	A464SK-4
Acetone	Certified ACS	4L	A18SK-4
Acetone	HPLC	1L	A949SK-1
Acetone	HPLC/ACS	4L	A949SK-4
Acetone	Optima/ACS	4L	A929SK-4
Acetonitrile	HPLC/ACS	1L	A998SK-1
Acetonitrile	HPLC/ACS	4L	A998SK-4
Acetonitrile	Optima/ACS	4L	A996SK-4
Chloroform	HPLC/ACS	4L	C606SK-4
Chloroform	Certified ACS	4L	C298SK-4
Chloroform	HPLC/ACS	1L	C606SK-1
Chloroform	Spectranalyzed	4L	C574SK-4
Chloroform with Pentene	HPLC/ACS	1L	C607SK-1
Chloroform with Pentene	HPLC/ACS	4L	C607SK-4
Cyclohexane	HPLC/ACS	1L	C620SK-1
Cyclohexane	HPLC/ACS	4L	C620SK-4
Ethyl Acetate	HPLC/ACS	1L	E195SK-1
Ethyl Acetate	HPLC/ACS	4L	E195SK-4
Ethyl Acetate	Certified ACS	4L	E145SK-4
Ethyl Acetate	Optima	4L	E196SK-4
Ethyl Alcohol	Denatured	4L	A407SK-4
Heptane	HPLC	1L	H350SK-1
Heptane	HPLC	4L	H350SK-4
Hexanes	HPLC	1L	H302SK-1
Hexanes	HPLC	4L	H302SK-4
Hexanes	Optima/ACS	4L	H303SK-4
Hexanes	Certified ACS	4L	H292SK-4
Isooctane	HPLC/ACS	1L	0296SK-1
Isooctane	HPLC/ACS	4L	0296SK-4
Methanol	Certified ACS	4L	A412SK-4
Methanol	HPLC/ACS	1L	A452SK-1
Methanol	HPLC/ACS	4L	A452SK-4
Methanol	Optima/ACS	4L	A454SK-4
Methanol	Scintanalyzed/ACS	4L	A408SK-4

Visit fishersci.com/safecote to watch the video and s	ee
the difference.	

Description	Purity Grade	Size	Cat. No.
Methylene Chloride	HPLC	1L	D150SK-1
Methylene Chloride	HPLC	4L	D150SK-4
Methylene Chloride	HPLC/ACS	1L	D143SK-1
Methylene Chloride	Certified ACS	4L	D37SK-4
Methylene Chloride	HPLC/ACS	4L	D143SK-4
Methylene Chloride	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	P399SK-1
Pentane	HPLC	4L	P399SK-4
Petroleum Ether	Certified ACS	4L	E139SK-4
Petroleum Ether	Optima/ACS	4L	E120SK-4
Tetrahydorfuran	Certified	4L	T397SK-4
Tetrahydorfuran	HPLC/ACS	1L	T425SK-1
Tetrahydorfuran	HPLC/ACS	4L	T425SK-4
Tetrahydorfuran	Optima/ACS	4L	T427SK-4
Toluene	Certified ACS	4L	T324SK-4
Toluene	HPLC/ACS	1L	T290SK-1
Toluene	HPLC/ACS	4L	T290SK-4
Toluene	Optima	4L	T291SK-4
Toluene	Scintanalyzed/ACS	4L	T313SK-4
Water	HPLC	1L	W5SK-1
Water	HPLC	4L	W5SK-4
Water	Optima	4L	W7SK-4
Xylenes	Certified ACS	4L	X5SK-4

The Fisher Chemical<sup>™</sup> products listed here are packaged in Safe-Cote<sup>™</sup> PVC-coated bottles that combine the purity of glass with the benefits of plastic storage. If a Safe-Cote bottle breaks, glass fragments and liquids are contained, which reduces the hazards and mess of a chemical spill.

- · Convenient storing and dispensing
- Innovative FisherLOCK<sup>™</sup> tamper-evident cap
- Packaged in the 100% recyclable Styrofoam-free EcoSafPak

Products might not be available in all regions. Contact your local sales representative for details.

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## SDS and Lot-Specific CofA at Your Fingertips

Get safety information fast: Scan the QR code to retrieve SDS and lot-specific CofA right to your smartphone or tablet anytime, anywhere.



## Features and Benefits:

- Get critical safety information quickly and easily
- No delays in responding to safety issues
- Send to your email or printer
- Store for later use

Visit fishersci.com/QR to see which Fisher Chemical and Fisher BioReagents<sup>™</sup> products are labeled with a QR code.

Solvent	Grade	Quantity	Packaging	Cat. No.
Methanol	Optima	4L	Amber Glass	A454-4
Acetonitrile	Optima	4L	Amber Glass	A996-4
Methylene Chloride	Optima	4L	Amber Glass	D151-4
Hexane	Optima	4L	Amber Glass	H303-4
Acetone	Optima	4L	Amber Glass	A929-4
N-Hexane, 95%	Optima	4L	Amber Glass	H306-4
Ethyl Acetate	Optima	4L	Amber Glass	E196-4
2-Propanol	Optima	4L	Amber Glass	A464-4
Water	Optima	4L	Amber Glass	W7-4
Chloroform (Approx. 50ppm Amylene as Preservative)	Optima	4L	Amber Glass	C297-4
Propylene Glycol	USP/FCC	20L	Steel Pail	P355-20
Propylene Glycol	USP/FCC	4L	Amber Glass	P355-4
Glycerin	USP/FCC	4L	Glass Bottle	G31-4
2-Propanol	USP	4L	Amber Glass	A516-4
2-Propanol	USP	20L	Steel Pail	A516-20
Methanol	NF	4L	Amber Glass	A413-4
Formaldehyde (40 percent by Volume)	USP	4L	Poly Bottle	F77-P4
Acetone	NF/FCC	20L	Steel Pail	A11-20
Glycerin	USP/FCC	20L	Poly Pail	G31-20
Glycerin	EP/BP/USP/FCC	200L	Poly Drum	G30-200
Acetone	NF/FCC	4L	Amber Glass	A11-4
Formaldehyde (40 percent by Volume)	USP	20L	Rigid Poly Bottle/ Corrugated Box	F77-20
0.05% TFA in Water	HPLC	4L	Amber Glass	HB512-4
0.1% TFA in Water	HPLC	4L	Amber Glass	HB513-4
0.1% FA in Water	HPLC	4L	Amber Glass	HB523-4
0.1% FA and 0.1% TFA in Water	HPLC	4L	Amber Glass	HB534-4
0.05% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9812-4
0.1% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9813-4
0.5% FA in Acetonitrile	HPLC	4L	Amber Glass	HB9822-4
0.1% FA in Acetonitrile	HPLC	4L	Amber Glass	HB9823-4
0.1% FA and 0.1% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9834-4
0.1% FA in Water	Optima LC/MS	4L	Amber Glass	LS118-4
0.1% TFA in Water	Optima LC/MS	4L	Amber Glass	LS119-4
0.1% FA in Acetonitrile	Optima LC/MS	4L	Amber Glass	LS120-4
0.1% TFA in Acetonitrile	Optima LC/MS	4L	Amber Glass	LS121-4

### Resources

## Seamless Aluminum Containers

### Bring Safety and Convenience to Your lab

Designed to contain ethers, Fisher Chemical<sup>™</sup> aluminum round cans are seamless, lightweight, and have a tamper-evident cap with an easy-to-use pouring handle. They are pure aluminum, which minimizes Na+ and K+ adduct formation.

#### Safety

- Protects against leaks, corrosion and breakage
- Seamless construction one piece extrusion of aluminum
- PTFE-lined tamper evident closure to protect the ether from the outside atmosphere

#### Convenience

- Lightweight/ergonomic
- · Easy to handle pouring handle
- Recyclable

•

Multiple sizes available based on your need.



Name	Grade	Quantity	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
2-Propanol	Histological	4L	A426S-4
Acetone	NF/FCC	4L	A11S-4
Acetone	Histological	4L	A16S-4
Acetone	Certified ACS	4L	A18S-4
Alcohol Reagent	Histological	4L	A962S-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	Technical	4L	C295S-4
Chloroform (Ethanol as Preservative)	Certified ACS	4L	C298S-4
Ethyl Acetate	Certified ACS	4L	E145S-4
Ethyl Alcohol Denatured	Laboratory	4L	A407S-4
Ethed Ether		1L	E134-1
Ethyl Ether	Laboratory	4L	E134-4
Ethyl Ether	Spectranalyzed	4L	E197-4
Ethyl Ether	HPLC	4L	E198-4
Ethyl Ether for Fat Extraction	Laboratory	4L	E492-4
		500mL	E138-500
Ethyl Ether, Anhydrous	Certified ACS	1L	E138-1
		4L	E138-4
Hexanes	Technical	4L	N3S-4
Hexanes	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
Xylenes	Certified ACS	4L	X5S-4

Place your order today!

Resources

## High-Volume Solvent Delivery Systems

## The Eco-Friendly Option for Your Lab

### **FisherPak**

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

#### Key Features:

- Custom solvents blended and/or tested to your specific requirements
- Customizable to your needs with our extensive list of accessories
- Integrated fork channels are available for larger sizes

Available Sizes: 19L, 50L, 115L, 200L, 1350L

### **BasicPak**

The Fisher Chemical 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 7-15psig without contamination.

#### **Key Features:**

- Equipped with Mico-Matic coupling technology
- Safety pin on dust cap provides tamper evidence
- Heavy-duty fork channels made of 316 stainless steel are available

Available Sizes: 19L, 50L, 200L

### DelPak

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

#### Key Features:

- Constructed in FDA-approved high density blow molded polyethylene liner
- · Steel overpack (pail)
- Inner liner bottle has a two-inch buttress plug with a three-fourth inch NPT center reducer plug and handle for easy removal
- Nine-gauge wire handle with plastic grip for carrying

Available Size: 18L



#### NowPak I

The inner liner of NowPak<sup>™</sup> I is constructed with an inert fluorocarbon polymer that is compatible with all highpurity solvents. The inner liner collapses around the dip tube during dispensing, which prevents air from entering the system. The sealed dispensing options also eliminate introduction of lab impurities into the solvent.

#### Key Features:

- Six different dispensing options to meet a variety of needs
- Liners are pre-cleaned in a class 10/100 cleanroom environment to provide ultimate purity
- · Liner materials have no pigments, adhesives, additives or stabilizers
- Double-containment design enhances safety and meets OSHA guidelines
- HDPE overpack includes a UV-blocking additive
- Available Size: 19L

#### NowPak II

The NowPak II precleaned liner technology is offered in a pressurizable, stainless-steel overpack. The system permits ultra-clean chemical dispensing without direct contact of the chemical with the drive gas. Drive gas pressure is applied to the outside of the liner, minimizing gas entrainment or micro-bubble formation. As the fill material

is dispensed, the inner liner collapses. After emptying the system, the liner is simply removed and the overpack is ready for insertion of a new, precleaned liner. The overpack, closer, and dip tube are designed for reuse.

**Key Features:** 

- Reusable stainless-steel (304) overpack with 15psi maximum operating pressure
- Pressure or pump dispense connector options
- Fluoropolymer, PTFE, or PFA liner options
- Breakseal or thread on/off closure options
   Available Size: 19L





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## FisherPak Solvent Delivery System

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

From lab to production scale, the Fisher Chemical<sup>™</sup> FisherPak<sup>™</sup> System delivers solvents with enhanced safety, reduced waste and improved productivity. Process synthesis, extractions, preparative chromatography, and high-volume gas chromatography sample preparation in the size that you need.

### **Protecting Purity**

The FisherPak System protects solvent purity throughout shipment, delivery, installation and dispensing.

- Cleaned and pressure tested Type 316 stainless-steel containers
- Stainless-steel cover
- Tamper-evident closure
- Closed system reduces waste and contamination of solvent during dispensing

### **Enhancing Safety**

A unique combination of mechanical and manual controls protects the lab and the environment.

- Bottle-free, closed system eliminates glass breakage and reduces the risk of spills and exposure to vapors
- · Unique horizontal vapor venting for superior fire safety
- Secondary manual shut-off valves, in addition to isolation valves, are incorporated into the quick connect hardware
- Color-coded connectors help to prevent improper hookups (optional)
- Meets Department of Transportation and NFPA 30 standards

### **Improving Productivity**

FisherPak Solvent Delivery System increases lab efficiency while reducing lab operating costs by:

- Reducing solvent testing
- Eliminating bottle rinsing
- Cutting disposal costs

### **Promoting Environmentally Friendly Practices**

Using the FisherPak system will reduce the amount of solid waste generated in your laboratory and keep it out of the environment.

- A reusable 200L FisherPak container replaces 50 four liter bottles and packing material
- Flammable or toxic solvent liquids and vapors are not released into the surrounding air
- Empty FisherPak containers are cleaned and refilled by the Fisher Scientific<sup>™</sup> team — no more individual bottle rinsing for disposal

### Visit fishersci.com/fisherpak to learn more.



Almost 200 lb. of glass, cardboard and foam inserts are eliminated by each 200L FisherPak



Contact your local Fisher Scientific Representative for FisherPak availability.

Place your order today!

Fisher Scientific U.S.: 1-800-766-7000 | fishersci.com/chemicals

Resources

## **Commonly Requested FisherPak Solvents and Their Weights**

The following is a list of commonly ordered FisherPak solvents and their weights. Contact your Fisher Scientific Representative to ask about custom solvents and solutions and for FisherPak availability.

			By Gross Fill Weight								
		19L		50L		115L		200L		1350L	
Chemical	Density	LB	KG	LB	KG	LB	KG	LB	KG	LB	KG
2-Propanol	0.785	57.1	25.9	129.5	58.8	269.6	122.3	437.9	198.6	3,194.50	1,437.50
Methanol	0.792	57.4	26.0	130.2	59.1	271.2	123.0	440.7	199.9	3,173.00	1,427.90
Acetone	0.788	57.0	25.9	129.9	58.9	270.3	122.6	439.2	199.2	3,173.00	1,427.90
Alcohol	0.782	56.9	25.8	129.2	58.6	268.8	121.9	436.5	198.0	3,158.50	1,421.30
Acetonitrile	0.775	56.7	25.7	128.4	58.3	267.0	121.1	433.4	196.6	3,149.00	1,417.10
Chloroform	1.471	85.8	39.0	205.1	93.1	443.5	201.2	740.3	335.8	5,208.50	2,343.80
Methylene Chloride	1.326	79.7	36.2	189.1	85.8	406.6	184.4	676.1	306.7	4,760.00	2,142.00
Ethyl Acetate	0.902	62.0	28.1	142.4	64.6	299.2	135.7	489.4	222.0	3,500.00	1,575.00
Hexane	0.660	51.8	23.5	115.7	52.5	237.9	107.9	382.7	173.6	2,807.00	1,263.20
Iso-Octane	0.692	53.2	24.1	119.3	54.1	246.0	111.6	396.8	180.0	2,879.00	1,295.60
Petroleum Ether	0.630	50.6	23.0	112.4	51.0	230.3	104.5	369.5	167.6	2,600.00	1,170.00
Toluene	0.866	60.5	27.5	138.4	62.8	290.1	131.6	473.5	214.8	3,381.40	1,521.60
THF	0.889	61.4	27.9	141.0	64.0	296.0	134.3	483.8	219.4	3,467.00	1,560.20
Water	1.000	66.1	30.0	153.2	69.5	324.1	147.0	532.6	241.6	3,800.00	1,710.00

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.

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## FisherPak Specifications

#### **FisherPak Dimensions**

Size	Height (Tap to Sump)	Height (Overall)	Diameter (Outer)	Tare Wt. (approx. kg)	Overflow Capacity
19L	15.7"	22.2"	11.10"	10.8	20.0L
50L	27.8"	28.8"	16.00"	19.5	56.0L
115L	23.4"	30.5"	21.80"	32.0*	117.4L
200L	39.8"	47.0"	21.80"	41.6*	208.0L
1350L***	68.9"	71.7"	47.24"**	360.0	1441.0L

\* Weights of 200L and 115L drums with ID numbers above 800 will be higher. (200L = 45.7kg)

\*\* Footprint of the 1350L is 47" × 47". Diameter of the IBC is less than the base width.

\*\*\*The 1350L IBC is made from high-grade Type 304 stainless steel and is not electropolished.

#### **Fork Channel Dimensions**

Left (front to back)	24"
Width (left to right)	22.375"
Height	4"
Weight	77 lb. (35kg)



#### **FisherPak Accessories**

The Fisher Chemical<sup>™</sup> FisherPak<sup>™</sup> Solvent Delivery System offers an array of accessories to fit your individual needs.

Image	Part Number	Accessory and Description
	FPAKSOLVKIT	FisherPak Solvent Dispensing Kit Consists of three components: QTM4 Compression fitting, TFE braided hose and a grounding clip. Used with all FisherPaks except 19L size, which requires FP19SOLVKIT.
	FP19SOLVKIT	FisherPak Solvent Dispensing Kit for 19L FisherPaks Consists of three components: QTM2 Compression fitting, TFE braided hose and a grounding clip. Used ONLY with 19L FisherPaks.
	FPAKGASKIT	<b>FisherPak Gas Delivery Kit</b> Consists of four main components: QTM2 Compression fitting, a cross piece, TFE braided hose and a PFA tube. These components are used to connect your inert gas supply to the FisherPak to maintain a positive pressure, assist with product dispensing and help maintain product purity.

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#### FisherPak Accessories (contd.)

Image	Part Number	Accessory and Description
	14117V	FisherPak Safety Autovalve Safety dispensing valve that automatically shuts off to help eliminate the possibility of spills.
	14118HD	FisherPak Heavy-Duty Integrated Forklift Channels These permanently connected and integrated forklift channels for FisherPaks facilitate moving of the containers with forklift equipment.
	FL14117K	Grounding Clip with five feet of wire A safety device used to ground the FisherPak

\* Other accessories may be available in your region. Contact your Fisher Scientific™ Sales Representative to learn more.

Each FisherPak Solvent Delivery System is configured to meet the unique requirements of the laboratory it serves. A Fisher Scientific Representative will work with you to mutually determine the optimal container fleet size and accessories to assure your needs are met by establishing:

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

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## Fisher Chemical: Purity Grades for Every Application

Grade	Definition	Application
Optima™ UHPLC/MS	ima <sup>™</sup> UHPLC/MS Solvents qualified for UHPLC/MS; Meets tight specifications for signal-to-noise ratios, metal contamination, gradient suitability and UV-absorbing contaminants. Submicron filtered and packaged in borosilicate glass bottles.	
Optima LC/MS	contaminants measured from 200 to 400nm; submicron filtered.	
Optima	Acids and solvents of extremely high purity (to ppt and ppm levels, respectively). Lots are analyzed by ICP/MS for more than 55 metals; actual lot specifications may vary from published levels.	HPLC, GC, plasma/ICP, spectrophotometry, and pesticide residue analysis
HPLC	C Solvents processed and submicron filtered for HPLC instruments; meet ACS specifications.	
GC Resolv	Solvents for gas chromatography with purity to ppb levels; meet ACS specifications and limits for the Contract Laboratory Program Target Compound List.	Gas Chromatography (GC)
Pesticide	sticide Solvents for pesticide residue analysis; meet or exceed ACS pesticide testing standards.	
Environmental Grade		
Certified ACS Plus	tified ACS Plus Acids that meet or exceed the latest ACS specifications and are tested for more than 16 metals.	
Certified ACS	Reagent chemicals that meet or exceed the latest ACS Specifications.	Analytical applications requiring tight specifications
Certified	Reagent chemicals that meet published maximum impurity limits.	General analytical procedures
Spectranalyzed	Solvents for spectrophotometric analysis; meet or exceed latest ACS specifications.	Ultraviolet and visible wavelength (UV-Vis) spectrophotometry
Plasma Grade	Solvents processed for use with plasma/ICP instruments and with impurity levels in ppt; packaged in acid-cleaned PE bottles.	Plasma/ICP, environmental testing trace-metal analysis
TraceMetal	Acids processed for low metal contamination (in the ppm to ppb range). Lots are analyzed by ICP/MS for more than 55 metals; actual lot specifications may vary from published levels.	Sample digestion for ICP analysis
USP/NF/FCC/EP/ BP/JP	Reagent chemicals that meet or surpass specifications 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).	Food and drug laboratories, biological testing
Histology	Solvents and products that have been filtered and prepared for tissue processing and histology laboratory use.	Tissue processing, clinical or histology procedures
Biotechnology	Solvents and reagents that have been specially purified and assayed for biotechnology applications.	Electrophoresis, molecular biology sequencing, and synthesis
Scintanalyzed	Solvents, fluors, and prepared mixtures for liquid scintillation counting.	Liquid scintillation counting
Electronic	Solvents processed to contain low metal levels; meet Semiconductor Equipment and Materials Institute (SEMI) requirements.	Electronics and circuit board manufacturing
Laboratory, Technical and Reagent	Chemicals of reasonable purity for situations where no official standard for quality or impurity levels exist.	Manufacturing and general laboratory use

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Grades

## **Optima UHPLC/MS Solvents**

Fisher Chemical<sup>™</sup> Optima<sup>™</sup> UHPLC/MS high-quality solvents are ultra-pure, and designed to address trace analysis needs of chromatographers performing state-of-the-art UHPLC.

Solvent	Pack Size	Packaging	Cat. No.
Acetonitrile	1L	Borosilicate Glass	A956-1
Methanol	1L	Borosilicate Glass	A458-1
Water	1L	Borosilicate Glass	W8-1

These solvents will help you produce clear, reproducible results.

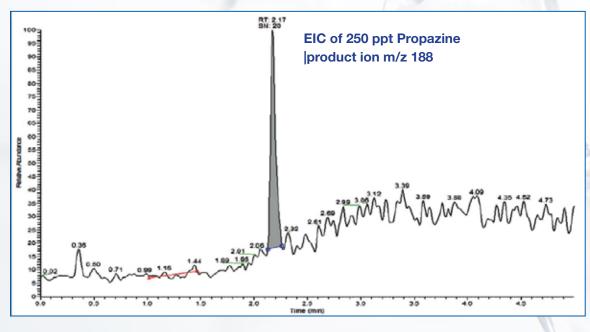
- Ideal for detecting trace amounts of analyte by MS/MS using either gradient or direct-flow analysis without baseline interference
- Provide a very low mass/noise level in both positive- and negative-mode ionization
- Minimal metal ion content
- Low UHPLC/UV response using photo diode array detection

How can you be sure the products you use will deliver the consistent performance you need? Optima UHPLC/MS solvents are qualified for use with UHPLC/MS instrumentation, such as the Thermo Scientific<sup>™</sup> Vanquish<sup>™</sup> Horizon UHPLC System.

## **Confidence in Your Results** UHPLC/MS Gradient Suitability Test

### **UHPLC/MS Specification:**

In positive mode ionization, any eluted peak height is < 25 ppb Propazine parent ion m/z 230 in full scale TIC and EIC.



Read our white paper in the resources section of fishersci.com/FisherChemical to learn more about the UHPLC-MS/MS specifications of our solvents and see how they performed in the UHPLC/MS Gradient Suitability Test.





### Grades

## **Optima LC/MS Solvents: Optimized for UHPLC/UV**

### Acetonitrile: A955 | Methanol: A456 | Water: W6

- Optimized for UHPLC/UV with novel gradient elution test in the full UV range (200-400nm) that ensures extremely low levels of UV-absorbing impurities
- Sub-micron filtration of Optima LC/MS solvents prolongs the life and effectiveness of UHPLC components such as inlet filters, check valves and seals, injectors, and columns by reducing instrument downtime and maintenance cost
- Filtration feature provides very low particle content for maximum purity
- Protease tested perfect for Proteomics workflows

### Improved Performance

Fisher Chemical<sup>™</sup> Optima<sup>™</sup> LC/MS solvents now lead the industry with an unprecedented LC/UV gradient suitability specification that was developed by using advanced UHPLC technology coupled with PDA detection optics. As a result, each lot of Optima LC/MS solvent is screened for UV-absorbing contaminants at every wavelength in the 200-400nm range to afford smooth baselines, reduced interferences, and increased confidence in your analyses.

In addition, Optima LC/MS solvents are formulated for UHPLC/UV, which requires the mobile phase to be free of contaminating particulates and UV-absorbing impurities.

- Lower contamination from plasticizer peaks
- · Exceptionally low metal ion content
- · Fewer background peaks
- Higher signal intensity
- Low LC/UV response

Acetonitrile	Optima LC/MS	500mL	Amber Glass	A955-500*
Acelonnine	Optima Lo/Ivio	SUOIIIL	AITIDEI GIASS	A900-000
Acetonitrile	Optima LC/MS	1L	Amber Glass	A955-1*
Acetonitrile	Optima LC/MS	2.5L	Amber Glass	A955-212*
Acetonitrile	Optima LC/MS	4L	Amber Glass	A955-4*
Methanol	Optima LC/MS	500mL	Amber Glass	A456-500*
Methanol	Optima LC/MS	1L	Amber Glass	A456-1*
Methanol	Optima LC/MS	2.5L	Amber Glass	A456-212*
Methanol	Optima LC/MS	4L	Amber Glass	A456-4*
2-Propanol	Optima LC/MS	500mL	Amber Glass	A461-500*
2-Propanol	Optima LC/MS	1L	Amber Glass	A461-1*
2-Propanol	Optima LC/MS	2.5L	Amber Glass	A461-212*
2-Propanol	Optima LC/MS	4L	Amber Glass	A461-4*
Water	Optima LC/MS	500mL	Amber Glass	W6-500*
Water	Optima LC/MS	1L	Amber Glass	W6-1*
Water	Optima LC/MS	2.5L	Amber Glass	W6-212*
Water	Optima LC/MS	4L	Amber Glass	W6-4*

\*Formulated for UHPLC/UV



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Grades

## **Optima LC/MS Mobile Phase Blends**

Our high-purity solvents are submicron filtered (0.1 $\mu$ m) to minimize troublesome particles that may interfere with UHPLC system performance and provide an ideal solution to prepare cleaner, particle-

free, mobile phase blends for UHPLC.

### **Advantages**

- Ready-to-use
- Avoids the possibility of contamination or error that can occur with in-house blended solvents
- Eliminates the need to clean glassware or measure corrosive acids
- Eliminates batch-to-batch variation
- Reduces overhead costs associated with preparing blends
- Reduces many of the safety risks associated with storing, blending, and disposing of hazardous solvents and acids
- Ultra-filtered to ensure low levels of particulate contamination
- Protease free

### **Applications**

- Proteomics
- Pharmaceutical Research
- Drug Discovery
- Biomedical Research



## FA and TFA, Optima LC/MS Mobile Phase Blends

Fisher Chemical<sup>™</sup> Optima<sup>™</sup> LC/MS solvents have set the standard of excellence for consistent, reproducible performance in the mobile phase of LC/MS. Now, these same high-purity solvents are preblended with Optima LC/MS modifiers such as formic acid (FA) or trifluoroacetic acid (TFA) to provide ready-to-use aqueous and organic mobile phase blends for LC/MS and LC/UV applications. In recent laboratory experiments, Optima LC/MS solvent blends were shown to meet the stringent purity requirements of LC/MS by providing a consistent concentration of FA or TFA, a very low mass baseline (noise level), exceptionally low metal ion content, and very low LC/UV background. Moreover, the protease-free specification of the aqueous blends is important for proteomics research since peptides/proteins could be degraded if the mobile phase solution is contaminated with protease. Optima LC/MS pre-blended solvents are manufactured in facilities with an ISO 9001 certified quality system to ensure optimum quality and product uniformity.

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
0.05% TFA in Water	Optima LC/MS	4L	Amber Glass	LS1154
0.05% TFA in Acetonitrile	Optima LC/MS	4L	Amber Glass	LS1174
0.1% FA in Water	Optima LC/MS	500mL	Amber Glass	LS118-500
0.1% FA in Water	Optima LC/MS	1L	Amber Glass	LS118-1
0.1% FA in Water	Optima LC/MS	2.5L	Amber Glass	LS118-212
0.1% FA in Water	Optima LC/MS	4L	Amber Glass	LS118-4
0.1% TFA in Water	Optima LC/MS	500mL	Amber Glass	LS119-500
0.1% TFA in Water	Optima LC/MS	1L	Amber Glass	LS119-1
0.1% TFA in Water	Optima LC/MS	2.5L	Amber Glass	LS119-212
0.1% TFA in Water	Optima LC/MS	4L	Amber Glass	LS119-4
0.1% FA in Acetonitrile	Optima LC/MS	500mL	Amber Glass	LS120-500
0.1% FA in Acetonitrile	Optima LC/MS	1L	Amber Glass	LS120-1
0.1% FA in Acetonitrile	Optima LC/MS	2.5L	Amber Glass	LS120-212
0.1% FA in Acetonitrile	Optima LC/MS	4L	Amber Glass	LS120-4
0.1% TFA in Acetonitrile	Optima LC/MS	500mL	Amber Glass	LS121-500
0.1% TFA in Acetonitrile	Optima LC/MS	1L	Amber Glass	LS121-1
0.1% TFA in Acetonitrile	Optima LC/MS	2.5L	Amber Glass	LS121-212
0.1% TFA in Acetonitrile	Optima LC/MS	4L	Amber Glass	LS121-4
80% Acetonitrile, with 0.1% Formic Acid	Optima LC/MS Grade	500mL	Amber Glass	LS122-500
Formic Acid	Optima LC/MS	50mL	Poly Bottle	A117-50
Formic Acid	Optima LC/MS	10 x 1mL	Ampule	A117-10XAMP
Formic Acid	Optima LC/MS	1mL	Ampule	A117-1AMP
Formic Acid	Optima LC/MS	0.5mL	Ampule	A117-05AMP
Formic Acid	Optima LC/MS	2mL	Ampule	A117-2AMP
Trifluoroacetic Acid	Optima LC/MS	50mL	Poly Bottle	A116-50
Trifluoroacetic Acid	Optima LC/MS	10 x 1mL	Ampule	A116-10X1AMP
Trifluoroacetic Acid	Optima LC/MS	1mL	Ampule	A116-1AMP
Trifluoroacetic Acid	Optima LC/MS	0.5mL	Ampule	A116-05AMP
Trifluoroacetic Acid	Optima LC/MS	2mL	Ampule	A116-2AMP

Grades

### FA and TFA, Optima LC/MS Grade

High-purity solvents are pre-blended with modifiers such as formic acid (FA) or trifluoroacetic acid (TFA) to provide ready-to-use mobile phase for LC/MS and LC/UV applications.

### Available in Ampules

Trifluoroacetic acid is an ultrapure reagent used as an additive for the formulation of solvent blends for the mobile phase in LC/MS applications.



## Specialty Mobile Phase Blends

Our specialized solvent blends have been developed for use in liquid chromatographymass spectrometry and are ideal for research applications including proteomics, metabolomics, clinical chemistry and drug discovery.

- Optimal ionic strength and low pH help analyte retention/elution through reverse phase columns by eliminating stationary phase interactions
- · Reduced metals content to prevent the formation of metal adducts
- . Innovative packaging to ensure solvent quality at the point of use
- Reduced safety risk associated with storing, blending and disposing of hazardous solvents
- Lowest impurity background using diode array detection (LC/UV)
- Lot-to-lot consistency
- Optima LC/MS mobile phase extends LC/MS column life due to low impurity levels and low residue value
- Very effective in solubilizing hydrophobic polypeptides
- · Flush solution designed for difficult-to-clean samples, such as plasma and urine



Solvent	Purity Grade	Quantity	Packaging	Cat. No.
45% Acetonitrile, 45% IPA, 10% Acetone	Flush Solution	1L	Borosilicate Glass	MB124-1
10mM Ammonium Formate in Water with 0.05% Formic Acid	Aqueous Mobile Phase	1L	Borosilicate Glass	MB123-1
10mM Ammonium Formate in Methanol with 0.05% Formic Acid	Organic Mobile Phase	1L	Borosilicate Glass	MB122-1

Grades

### **Optima Solvents**

Fisher Chemical Optima Solvents meet extremely high-purity (ppm) levels. They are manufactured for use when contaminant-free performance is essential — HPLC, GC, plasma/ICP, spectrophotometry, environmental testing and other analytical applications.

- Contaminant-free to ppb and ppm levels, depending on solvent
- Certificate of Analysis available online or scan CofA QR code on label
- Blanketed with inert gas to maintain purity
- · Chromatograms available on request

• Supplied in specially cleaned bottles

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	Optima	1L	Amber Glass	A929-1
Acetone	Optima	4L	Amber Glass	A929-4
Acetone	Optima	4L	Glass/Safe-Cote	A929SK-4
Acetone	Optima	28L	FisherPak	A929RS-28
Acetone	Optima	115L	FisherPak	A929RS-115
Acetonitrile	Optima	1L	Amber Glass	A996-1
Acetonitrile	Optima	4L	Amber Glass	A996-4
Acetonitrile	Optima	4L	Amber Glass/Safe-Cote	A996SK-4
Acetonitrile	Optima	19L	FisherPak	A996N2-19
Chloroform (Approx. 50ppm Amylene as Preservative)	Optima	4L	Amber Glass	C297-4
Ethyl Acetate	Optima	4L	Amber Glass	E196-4
Ethyl Acetate	Optima	4L	Safe-Cote	E196SK-4
Ethyl Acetate Ethanol 3:1 Solution-Alternative to Chlorinated Solvents	Optima	1L	Amber Glass	E151-1
thyl Acetate Ethanol 3:1 Solution-Alternative to Chlorinated Solvents	Optima	4L	Amber Glass	E151-4
lexanes	Optima	1L	Amber Glass	H303-1
lexanes	Optima	4L	Amber Glass	H303-4
lexanes	Optima	4L	Amber Glass/Safe-Cote	H303SK-4
lexanes	Optima	19L	FisherPak	H303SS-19
n-Hexane, 95%	Optima	1L	Amber Glass	H306-1
n-Hexane, 95%	Optima	4L	Amber Glass	H306-4
n-Hexane, 95%	Optima	4L	Amber Glass/Safe-Cote	H306SK-4
sooctane	Optima	4L	Amber Glass	0301-4
Nethanol	Optima	1L	Amber Glass	A454-1
Vethanol	Optima	4L	Amber Glass	A454-4
Nethanol	Optima	4L	Amber Glass/Safe-Cote	A454SK-4
Vethanol	Optima	115L	FisherPak	A454SS-115
Aethanol	Optima	200L	FisherPak	A454SS-200
Methylene Chloride – Improved for Ultra Trace Analysis	Optima	1L	Amber Glass	D151-1
Methylene Chloride – Improved for Ultra Trace Analysis	Optima	4L	Amber Glass	D151-4
Methylene Chloride – Improved for Ultra Trace Analysis	Optima	4L	Amber Glass/Safe-Cote	D151SK-4
Vethylene Chloride	Optima	19L	FisherPak	D151SS-19
Petroleum Ether	Optima	4L	Amber Glass	E120-4
Petroleum Ether	Optima	4L	Amber Glass/Safe-Cote	E120SK-4
Petroleum Ether	Optima	28L	FisherPak	E120SS-28
Petroleum Ether	Optima	200L	FisherPak	E120SS-200
2-Propanol	Optima	4L	Amber Glass	A464-4
2-Propanol	Optima	4L	Amber Glass/Safe-Cote	A464SK-4
retrahydrofuran	Optima	1L	Amber Glass	T427-1
	Optima	4L	Amber Glass	T427-1
Tetrahydrofuran		4L 4L		T427-4
Tetrahydrofuran	Optima		Amber Glass/Safe-Cote	
Toluene	Optima	4L	Amber Glass	T291-4 T291SK-4
Foluene	Optima	4L	Safe-Cote/Amber Glass	
Foluene	Optima	19L	FisherPak	T291SS-19
Toluene	Optima	200L	FisherPak	T291RS-200
Water	Optima	1L	Amber Glass	W7-1
Water	Optima	4L	Amber Glass	W7-4
Water	Optima	4L	Safe-Cote/Amber Glass	W7SK-4

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### **GC Headspace Solvents** The Power of Precision

### Mitigate the risk of contaminants interfering with your test results

To achieve optimum conditions for laboratory testing, solvents must be free of interference that could contaminate headspace and potentially skew your results. Use a solvent not routinely tested for the absence of low-boiling organics, and you'll risk the accuracy of your research.

The solution is simple: Use a better solvent, get more reliable results. But how can you be sure which solvent is actually better? Fisher Chemical<sup>™</sup> Headspace Grade Solvents produce a clean solvent baseline with no extraneous peaks.

Residual Solvent Class	GC Headspace Solvent Suitability Specification	ICH Residual Solvent Concentration Limit
1	1 ppm max.	2 ppm (Benzene)
2	10 ppm max.	50 ppm (Methylbutyl-ketone)
3	50 ppm max.	NA

<sup>1</sup>International Conference of Harmonization

- Processed to high-purity for accurate and repeatable determination of trace levels of Class 1, Class 2, and Class 3 residual solvents in pharmaceuticals
- Tested by UV absorbance to ensure low organic contamination
- Processed for low water content to facilitate the extraction of organic volatile impurities
- Packaged in an inert atmosphere to maximize shelf life in unopened containers

F N140-1 LOT BARTY	F		F	Directly Sufficient
	D133-1 LOT SAME IN N.D. Constant N.D. Constant Tormarting Constant	W10-1 Lot same	D160-1 COTSAMPLI IN-DOWNERS BOTTONESS BOTTONESS BOTTONESS	Suttonia
A		The second		

Purity Grade	Quantity	Description	Cat. No.
GC Headspace	1L	Water	W10-1
GC Headspace	1L	DMSO, Dimethyl Sulfoxide	D139-1
GC Headspace	1L	DMF, N,N-Dimethylformamide	D133-1
GC Headspace	1L	DMAC, N,N-Dimethylacetamide	D160-1
GC Headspace	1L	NMP, N-Methyl-2-Pyrrolidone	N140-1

Read our white paper at fishersci.com/GCHeadspace to see the difference the right solvents can make.

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Grades

### GC Resolv Solvents

Fisher Chemical<sup>™</sup> GC *Resolv*<sup>™</sup> Solvents exhibit the very highest purity and lot-to-lot consistency for gas chromatography applications.

- Contaminant-free to ppb levels
- Meet ACS specifications
- Certificate of Analysis available online or scan CofA QR code on label
- Supplied in specially cleaned bottles
- Blanketed with inert gas to maintain purity
- Chromatograms available on request

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	GC Resolv	4L	Amber Glass	A928-4
n-Hexane	GC Resolv	4L	Amber Glass	H307-4
Methanol	GC Resolv	4L	Amber Glass	A457-4
Methylene Chloride	GC Resolv	4L	Amber Glass	D154-4
Methanol (Low Water)	GC Resolv	200L	BasicPak	A935RB-200
2-Propanol	GC Resolv	200L	FisherPak	A464RS-200

#### **HPLC Grade Solvents**

HPLC Grade Solvents are manufactured especially for use with HPLC instruments.

- Meet ACS specifications
- Submicron filtered
- Actual lot analysis on label

- Supplied in specially cleaned bottles
- Blanketed with inert gas to maintain purity
- Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	HPLC	1L	Amber Glass	A949-1
Acetone	HPLC	1L	Amber Glass/Safe-Cote	A949SK-1
Acetone	HPLC	4L	Amber Glass	A949-4
Acetone	HPLC	4L	Amber Glass/Safe-Cote	A949SK-4
Acetone	HPLC	19L	NOWPak I	A949N1-19
Acetone	HPLC	115L	FisherPak	A949SS-115
Acetonitrile	HPLC	1L	Amber Glass	A998-1
Acetonitrile	HPLC	1L	Amber Glass/Safe-Cote	A998SK-1
Acetonitrile	HPLC	2.5L	Amber Glass	A998212
Acetonitrile	HPLC	4L	Amber Glass	A998-4
Acetonitrile	HPLC	4L	Amber Glass/Safe-Cote	A998SK-4
Acetonitrile	HPLC	19L	NOWPak I	A998N1-19
Alcohol	HPLC	4L	Amber Glass	A995-4
Alcohol	HPLC	200L	FisherPak	A995RS-200
1-Butanol	HPLC	1L	Amber Glass	A383-1
1-Butanol	HPLC	1L	Amber Glass/Safe-Cote	A383SK-1
1-Butanol	HPLC	4L	Amber Glass	A383-4
1-Butanol	HPLC	4L	Amber Glass/Safe-Cote	A383SK-4
n-Butyl Chloride	HPLC	4L	Amber Glass	B429-4
n-Butyl Chloride	HPLC	4L	Amber Glass/Safe-Cote	B429SK-4
Chloroform (Approx. 50ppm Pentene as Preservative)	HPLC	1L	Amber Glass	C607-1
Chloroform (Approx. 50ppm Pentene as Preservative)	HPLC	1L	Amber Glass/Safe-Cote	C607SK-1
Chloroform (Approx. 50ppm Pentene as Preservative)	HPLC	4L	Amber Glass	C607-4
Chloroform (Approx. 50ppm Pentene as Preservative)	HPLC	4L	Amber Glass/Safe-Cote	C607SK-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	HPLC	1L	Amber Glass	C606-1
Chloroform (Approx. 0.75% Ethanol as Preservative)	HPLC	1L	Amber Glass/Safe-Cote	C606SK-1
Chloroform (Approx. 0.75% Ethanol as Preservative)	HPLC	4L	Amber Glass	C606-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	HPLC	4L	Amber Glass/Safe-Cote	C606SK-4

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### Grades

### HPLC Grade Solvents (continued)

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Cyclohexane	HPLC	1L	Amber Glass	C620-1
Cyclohexane	HPLC	1L	Amber Glass/Safe-Cote	C620SK-1
Cyclohexane	HPLC	4L	Amber Glass	C620-4
Cyclohexane	HPLC	4L	Amber Glass/Safe-Cote	C620SK-4
Dimethyl Sulfoxide	HPLC	4L	Amber Glass	D159-4
Ethyl Acetate	HPLC	1L	Amber Glass	E195-1
Ethyl Acetate	HPLC	1L	Amber Glass/Safe-Cote	E195SK-1
Ethyl Acetate	HPLC	4L	Amber Glass	E195-4
Ethyl Acetate	HPLC	4L	Amber Glass/Safe-Cote	E195SK-4
Ethyl Acetate	HPLC	19L	NOWPak I	E195N1-19
Ethyl Ether Anhydrous (Stabilized)	HPLC	4L	Tin Can	E198-4
Ethyl Ether Anhydrous (Stabilized)	HPLC	19L	FisherPak	E198SS-19
Heptane	HPLC	1L	Amber Glass	H350-1
Heptane	HPLC	1L	Amber Glass/Safe-Cote	H350SK-1
Heptane	HPLC	4L	Amber Glass	H350-4
Heptane	HPLC	4L	Amber Glass/Safe-Cote	H350SK-4
Heptane	HPLC	19L	FisherPak	H350RS-19
Heptane	HPLC	200L	FisherPak	H350RS-200
Hexanes	HPLC	1L	Amber Glass	H302-1
Hexanes	HPLC	1L	Amber Glass/Safe-Cote	H302SK-1
Hexanes	HPLC	4L	Amber Glass	H302-4
Hexanes	HPLC	4L	Amber Glass/Safe-Cote	H302SK-4
Hexanes	HPLC	50L	FisherPak	H302SS-50
Hexanes	HPLC	115L	FisherPak	H302SS-115
Hexanes	HPLC	200L	FisherPak	H302SS-200
Isooctane	HPLC	1L <	Amber Glass	0296-1
Isooctane	HPLC	1L	Amber Glass/Safe-Cote	0296SK-1
Isooctane	HPLC	4L	Amber Glass	0296-4
Isooctane	HPLC	4L	Amber Glass/Safe-Cote	0296SK-4
Methanol	HPLC	1L	Amber Glass	A452-1
Methanol	HPLC	1L	Amber Glass/Safe-Cote	A452SK-1
Methanol	HPLC	4L	Amber Glass	A452-4
Methanol	HPLC	4L	Amber Glass/Safe-Cote	A452SK-4
Methanol	HPLC	19L	NOWPak I	A452N1-19
Methyl tert-Butyl Ether	HPLC	4L	Amber Glass	E127-4
Methyl tert-Butyl Ether	HPLC	200L	FisherPak	E127RS-200
Methylene Chloride (Not Stabilized)	HPLC	1L	Amber Glass	D150-1
Methylene Chloride (Not Stabilized)	HPLC	1L	Amber Glass/Safe-Cote	D150SK-1
Methylene Chloride (Not Stabilized)	HPLC	4L	Amber Glass	D150-4
Methylene Chloride (Not Stabilized)	HPLC	4L	Amber Glass/Safe-Cote	D150SK-4
Methylene Chloride (Stabilized)	HPLC	1L	Amber Glass	D143-1
Methylene Chloride (Stabilized)	HPLC	1L	Amber Glass/Safe-Cote	D143SK-1
Methylene Chloride (Stabilized)	HPLC	4L	Amber Glass	D143-4
Methylene Chloride (Stabilized)	HPLC	4L	Amber Glass/Safe-Cote	D143SK-4
Methylene Chloride (Stabilized)	HPLC	50L	FisherPak	D143SS-50
Methylene Chloride (With Cyclohexene Preservative)	HPLC	1L	Amber Glass	D138-1
Methylene Chloride (With Cyclohexene Preservative)	HPLC	4L	Amber Glass	D138-4
Methylene Chloride (With Cyclohexene Preservative)	HPLC	4L	Amber Glass/Safe-Cote	D138SK-4

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Grades

#### **HPLC Grade Solvents (continuted)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Pentane	HPLC	1L	Amber Glass	P399-1
Pentane	HPLC	1L	Amber Glass/Safe-Cote	P399SK-1
Pentane	HPLC	4L	Amber Glass	P399-4
Pentane	HPLC	4L	Amber Glass/Safe-Cote	P399SK-4
Pentane	HPLC	19L	Steel Drum	P399RS-19
2-Propanol	HPLC	1L	Amber Glass	A451-1
2-Propanol	HPLC	1L	Amber Glass/Safe-Cote	A451SK-1
2-Propanol	HPLC	4L	Amber Glass	A451-4
2-Propanol	HPLC	4L	Amber Glass/Safe-Cote	A451SK-4
Tetrahydrofuran	HPLC	1L	Amber Glass	T425-1
Tetrahydrofuran	HPLC	1L	Amber Glass/Safe-Cote	T425SK-1
Tetrahydrofuran	HPLC	4L	Amber Glass	T425-4
Tetrahydrofuran	HPLC	4L	Amber Glass/Safe-Cote	T425SK-4
Tetrahydrofuran	HPLC	50L	FisherPak	T425SS-50
Toluene	HPLC	1L	Amber Glass	T290-1
Toluene	HPLC	1L	Amber Glass/Safe-Cote	T290SK-1
Toluene	HPLC	4L	Amber Glass	T290-4
Toluene	HPLC	4L	Amber Glass/Safe-Cote	T290SK-4
1,2,4-Trichlorobenzene	HPLC	4L	Amber Glass	04846-4
Triethylamine	HPLC	100mL	Amber Glass	04884-100
Vinyl acetate	HPLC	115L	BasicPak	05057FB-115
Water	HPLC	1L	Amber Glass	W5-1
Water	HPLC	1L	Amber Glass/Safe-Cote	W5SK-1
Water	HPLC	4L	Amber Glass	W5-4
Water	HPLC	4L	Amber Glass/Safe-Cote	W5SK-4
Water	HPLC	19L	NOWPak I	W5-N119

### **HPLC Grade Mobile Phase Blends**

HPLC mobile phase blends meet the strict purity requirements of HPLC by providing a consistent concentration of FA or TFA and a very low LC/UV background.

- Ready-to-use
- Submicron filtered
- Functional testing to ensure low impurity background (LC-UV at 210nm and 254nm)
- Packaged in specially treated bottles and sealed with FisherLOCK<sup>™</sup> caps to ensure highest product integrity and safety during transport
- Avoid the possibility of contamination that can occur with in-house blended solvents

Lot-to-lot consistency

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
0.05% TFA in Water	HPLC	4L	Amber Glass	HB512-4
0.1% TFA in Water	HPLC	4L	Amber Glass	HB513-4
0.1% FA in Water	HPLC	4L	Amber Glass	HB523-4
0.1% FA and 0.1% TFA in Water	HPLC	4L	Amber Glass	HB534-4
0.05% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9812-4
0.1% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9813-4
0.5% FA in Acetonitrile	HPLC	4L	Amber Glass	HB9822-4
0.1% FA in Acetonitrile	HPLC	4L	Amber Glass	HB9823-4
0.1% FA and 0.1% TFA in Acetonitrile	HPLC	4L	Amber Glass	HB9834-4
Tetrabutylammonium Hydroxide Solution (1M)	HPLC	25mL	Amber Glass	04577-25

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### Grades

### **Certified ACS Plus Solvents**

Certified ACS Plus Solvents meet or exceed the latest specifications of the ACS and are suitable for applications with tighter metal specifications. • Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
2-Propanol	Certified ACS Plus	500mL	Amber Glass	A416-500
2-Propanol	Certified ACS Plus	1L	Amber Glass	A416-1
2-Propanol	Certified ACS Plus	4L	Amber Glass	A416-4
2-Propanol	Certified ACS Plus	4L	Poly Bottle	A416P-4
2-Propanol	Certified ACS Plus	4L	SafeTin	A416S-4
2-Propanol	Certified ACS Plus	4L	Amber Glass/Safe-Cote	A416SK-4
2-Propanol	Certified ACS Plus	20L	Steel Pail	A416-20
2-Propanol	Certified ACS Plus	200L	Steel Drum	A416-200

#### **Certified ACS Solvents**

Certified ACS Solvents meet or exceed the latest ACS specifications and are suitable for analytical applications that require tight specifications. • Actual lot analysis on label

· Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetic Anhydride	Certified ACS	100mL	Amber Glass	A10-100
Acetic Anhydride	Certified ACS	500mL	Amber Glass	A10-500
Acetic Anhydride	Certified ACS	1L	Amber Glass	A10-1
Acetic Anhydride	Certified ACS	4L	Amber Glass	A10-4
Acetone	Certified ACS	500mL	Amber Glass	A18-500
Acetone	Certified ACS	1L	Amber Glass	A18-1
Acetone	Certified ACS	4L	Amber Glass	A18-4
Acetone	Certified ACS	4L	Poly Bottle	A18P-4
Acetone	Certified ACS	4L	SafeTin	A18S-4
Acetone	Certified ACS	4L	Amber Glass/Safe-Cote	A18SK-4
Acetone	Certified ACS	20L	Steel Pail	A18-20
Acetone	Certified ACS	200L	Steel Drum	A18-200
Acetonitrile	Certified ACS	1L	Amber Glass	A21-1
Acetonitrile	Certified ACS	4L	Amber Glass	A21-4
Acetonitrile	Certified ACS	20L	Steel Pail	A21-20
Acetonitrile	Certified ACS	200L	Steel Drum	A21-200
Aniline	Certified ACS	500mL	Amber Glass/Poison Pack	A740I-500
Aniline	Certified ACS	4L	Amber Glass/Poison Pack	A740I-4
n-Amyl Alcohol	Certified ACS	500mL	Amber Glass	A394-500
n-Amyl Alcohol	Certified ACS	4L	Amber Glass	A394-4
I-Butanol	Certified ACS	500mL	Amber Glass	A399-500
1-Butanol	Certified ACS	1L	Amber Glass	A399-1
1-Butanol	Certified ACS	4L	Amber Glass	A399-4
1-Butanol	Certified ACS	4L	SafeTin	A399S-4
1-Butanol	Certified ACS	20L	Steel Pail	A399-20
Carbon Disulfide	Certified ACS	500mL	Amber Glass	C184-500
Carbon Disulfide	Certified ACS	2.5L	Glass	C184-212
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	500mL	Amber Glass	C298-500
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	1L	Amber Glass	C298-1
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	4L	Amber Glass	C298-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	4L	SafeTin	C298S-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	4L	Amber Glass/Safe-Cote	C298SK-4
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	20L	Steel Pail	C298-20

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Grades

### **Certified ACS Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Chloroform (Approx. 0.75% Ethanol as Preservative)	Certified ACS	200L	Steel Drum	C298-200
Cyclohexane	Certified ACS	500mL	Amber Glass	C556-500
Cyclohexane	Certified ACS	1L	Amber Glass	C556-1
Cyclohexane	Certified ACS	4L	Amber Glass	C556-4
1,2-Dichloroethane	Certified ACS	500mL	Amber Glass	E175-500
1,2-Dichloroethane	Certified ACS	4L	Amber Glass	E175-4
1,2-Dichloroethane	Certified ACS	19L	FisherPak	E175RS-19
1,2-Dichloroethane	Certified ACS	20L	Steel Pail	E175-20
1,2-Dichloroethane	Certified ACS	50L	FisherPak	E175RS-50
N,N-Dimethylformamide	Certified ACS	500mL	Amber Glass	D119-500
N,N-Dimethylformamide	Certified ACS	1L	Amber Glass	D119-1
N,N-Dimethylformamide	Certified ACS	4L	Amber Glass	D119-4
N,N-Dimethylformamide	Certified ACS	4L	SafeTin	D119S-4
N,N-Dimethylformamide	Certified ACS	20L	Poly Pail	D119-20
N,N-Dimethylformamide	Certified ACS	200L	Steel Drum	D119-200
Dimethyl Sulfoxide	Certified ACS	500mL	Amber Glass	D128-500
Dimethyl Sulfoxide	Certified ACS	1L	Amber Glass	D128-1
Dimethyl Sulfoxide	Certified ACS	4L	Amber Glass	D128-4
Dimethyl Sulfoxide	Certified ACS	50L	FisherPak	D128RS-50
1,4-Dioxane	Certified ACS	500mL	Amber Glass	D111-500
1,4-Dioxane	Certified ACS	4L	Amber Glass	D111-4
Ethanol	Certified ACS, Absolute 200 Proof	500mL	Amber Glass	AC61509-5000
Ethanol	Certified ACS, Absolute 200 Proof	1L	Amber Glass	AC61509-0010
Ethanol	Certified ACS, Absolute 200 Proof	2L	Amber Glass	AC61509-0020
Ethanol	Certified ACS, Absolute 200 Proof	4L	Amber Glass	AC61509-0040
Ethyl Acetate	Certified ACS	500mL	Amber Glass	E145-500
Ethyl Acetate	Certified ACS	1L	Amber Glass	E145-1
Ethyl Acetate	Certified ACS	4L	Amber Glass	E145-4
Ethyl Acetate	Certified ACS	4L	SafeTin	E145S-4
Ethyl Acetate	Certified ACS	4L	Amber Glass/Safe-Cote	E145SK-4
Ethyl Acetate	Certified ACS	20L	Steel Pail	E145-20
Ethyl Acetate	Certified ACS	200L	Steel Drum	E145-200
Ethyl Ether Anhydrous (BHT Stabilized)	Certified ACS	500mL	Aluminum Can	E138-500
Ethyl Ether Anhydrous (BHT Stabilized)	Certified ACS	1L	Aluminum Can	E138-1
Ethyl Ether Anhydrous (BHT Stabilized)	Certified ACS	4L	Aluminum Can	E138-4
Ethyl Ether Anhydrous (BHT Stabilized)	Certified ACS	20L	Steel Pail	E138-20
Ethylene Glycol	Certified ACS	200L	Steel Drum	H292-200
Ethylene Glycol	Certified ACS	1L	Amber Glass	A397-1
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	500mL	Amber Glass	F79-500
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	1L	Amber Glass	F79-1
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	4L	Amber Glass	F79-4
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	4L	Poly Bottle	F79P-4
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	20L	Rigid Poly Bottle/Corrugated Box	F79-20
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	20L	PolyPac	F79P-20
Formaldehyde, 37% by Weight (with Preservative)	Certified ACS	200L	Poly Drum	F79-200
Formamide	Certified ACS	1L	Amber Glass	F84-1
Glycerol	Certified ACS	500mL	Amber Glass	G33-500
Glycerol	Certified ACS	1L	Amber Glass	G33-1
Glycerol	Certified ACS	4L	Amber Glass	G33-4

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### Grades

### **Certified ACS Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Glycerol	Certified ACS	20L	Rigid Poly Bottle/Corrugated Box	G33-20
Glycerol	Certified ACS	200L	Steel Drum	G33-200
Hexanes	Certified ACS	500mL	Amber Glass	H292-500
Hexanes	Certified ACS	1L	Amber Glass	H292-1
Hexanes	Certified ACS	4L	Amber Glass	H292-4
Hexanes	Certified ACS	4L	Amber Glass/Safe-Cote	H292SK-4
Hexanes	Certified ACS	20L	Steel Pail	H292-20
Hexanes	Certified ACS	28L	FisherPak	H292SS-28
Hexanes	Certified ACS	50L	FisherPak	H292SS-50
Hexanes	Certified ACS	115L	FisherPak	H292SS-115
Hexanes	Certified ACS	200L	Steel Drum	H292-200
Hexanes	Certified ACS	200L	FisherPak	H292SS-200
Isobutyl Alcohol	Certified ACS	1L	Amber Glass	A397-1
Isobutyl Alcohol	Certified ACS	4L	Amber Glass	A397-4
Isooctane	Certified ACS	1L	Amber Glass	0299-1
Isooctane	Certified ACS	4L	Amber Glass	0299-4
Isooctane	Certified ACS	115L	FisherPak	0299RS-115
Methanol	Certified ACS	500mL	Amber Glass	A412-500
Methanol	Certified ACS	1L	Amber Glass	A412-1
Methanol	Certified ACS	4L	Amber Glass	A412-4
Methanol	Certified ACS	4L	Poly Bottle	A412P-4
Methanol	Certified ACS	4L	Amber Glass/Safe-Cote	A412SK-4
Methanol	Certified ACS	20L	Unlined Steel Pail	A412-20
Methanol	Certified ACS	20L	Unichrome Steel Pail	A434-20
Methanol	Certified ACS	200L	Steel Drum	A412-200
Methyl Ethyl Ketone	Certified ACS	500mL	Amber Glass	M209-500
Methyl Ethyl Ketone	Certified ACS	1L	Amber Glass	M209-1
Methyl Ethyl Ketone	Certified ACS	4L	Amber Glass	M209-4
Methyl Ethyl Ketone	Certified ACS	4L	SafeTin	M209S-4
Methyl Ethyl Ketone	Certified ACS	20L	Steel Pail	M209-20
Methyl Ethyl Ketone	Certified ACS	200L	Steel Drum	M209-200
Methyl iso-Butyl Ketone	Certified ACS	1L	Amber Glass	M213-1
Methyl iso-Butyl Ketone	Certified ACS	4L	Amber Glass	M213-4
Methyl iso-Butyl Ketone	Certified ACS	20L	Steel Pail	M213-20
Methyl iso-Butyl Ketone	Certified ACS	200L	Steel Drum	M213-200
Methylene Chloride (Stabilized)	Certified ACS	500mL	Amber Glass	D37-500
Methylene Chloride (Stabilized)	Certified ACS	1L	Amber Glass	D37-1
Methylene Chloride (Stabilized)	Certified ACS	4L	Amber Glass	D37-4
Methylene Chloride (Stabilized)	Certified ACS	20L	Amber Glass/Safe-Cote	D37SK-4
Methylene Chloride (Stabilized)	Certified ACS	20L	Steel Pail	D37-20
Methylene Chloride (Stabilized)	Certified ACS	200L	Steel Drum	D37-200
Morpholine	Certified ACS	1L	Amber Glass	M263-1
Nitrobenzene	Certified ACS	500mL	Amber Glass/Poison Pack	N911-500
Nitrobenzene	Certified ACS	4L	Amber Glass/Poison Pack	N91I-4
Nitromethane	Certified ACS	500mL	Amber Glass	N98-500
Petroleum Ether	Certified ACS	4L	Amber Glass/Safe-Cote	E139SK-4
Pyridine	Certified ACS	500mL	Amber Glass	P368-500
Pyridine	Certified ACS	1L	Amber Glass	P368-1
Pyridine	Certified ACS	4L	Amber Glass	P368-4

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Grades

### **Certified ACS Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Pyridine	Certified ACS	4L	SafeTin	P368S-4
Toluene	Certified ACS	500mL	Amber Glass	T324-500
Toluene	Certified ACS	1L	Amber Glass	T324-1
Toluene	Certified ACS	4L	Amber Glass	T324-4
Toluene	Certified ACS	4L	SafeTin	T324S-4
Toluene	Certified ACS	4L	Amber Glass/Safe-Cote	T324SK-4
Toluene	Certified ACS	20L	Steel Pail	T324-20
Toluene	Certified ACS	200L	Steel Drum	T324-200
Trichloroethylene (Stabilized)	Certified ACS	500mL	Amber Glass	T341-500
Trichloroethylene (Stabilized)	Certified ACS	4L	Amber Glass	T341-4
Trichloroethylene (Stabilized)	Certified ACS	20L	Steel Pail	T341-20
Xylene	Certified ACS	500mL	Amber Glass	X5-500
Xylene	Certified ACS	1L	Amber Glass	X5-1
Xylene	Certified ACS	1 gal.	Poly Bottle	X5P-1GAL
Xylene	Certified ACS	4L	Amber Glass	X5-4
Xylene	Certified ACS	4L	SafeTin	X5S-4
Xylene	Certified ACS	4L	Amber Glass/Safe-Cote	X5SK-4
Xylene	Certified ACS	20L	Steel Pail	X5-20
Xylene	Certified ACS	200L	Steel Drum	X5-200

#### **Certified Solvents**

Certified Solvents meet the purity standard established by the Fisher Scientific<sup>™</sup> team and are manufactured for general analytical applications.

- · Purity is guaranteed to meet published maximum limits on impurities
- Certificate of Analysis available online and upon request or scan CofA QR code
   on label

Actual lot analysis on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetonitrile	Certified	500mL	Amber Glass	01034-500
Acetophenone	Certified	500mL	Amber Glass	A22-500
Acetyl Acetone	Certified	500mL	Amber Glass	A25-500
tert-Amyl Alcohol	Certified	1L	Amber Glass	A730-1
Benzyl Alcohol	Certified	500mL	Amber Glass	A396-500
Benzyl Alcohol	Certified	4L	Amber Glass	A396-4
Benzyl Alcohol	Certified	200L	Steel Drum	A396-200
sec-Butanol	Certified	1L	Amber Glass	01664-1
sec-Butanol	Certified	4L	Amber Glass	01664-4
tert-Butanol	Certified	500mL	Poly Bottle	A401-500
tert-Butanol	Certified	1L	Poly Bottle	A401-1
n-Butyl Bromide	Certified	500mL	Amber Glass	B400-500
n-Butyl Chloride	Certified	1L	Amber Glass	B416-1
n-Butyl Chloride	Certified	4L	Amber Glass	B416-4
n-Butylamine	Certified	500mL	Amber Glass	B415-500
Chlorobenzene	Certified	500mL	Amber Glass	B255-500
Chlorobenzene	Certified	1L	Amber Glass	B255-1
Chlorobenzene	Certified	200L	FisherPak	B254RS-200
Cyclohexanone	Certified	1L	Amber Glass	02109-1
Cyclohexanone	Certified	4L	Amber Glass	02109-4
Cyclohexanone	Certified	200L	Stainless Steel Drum	02109SS-200
2-Chloro-2-Methylpropane	Certified	500mL	Amber Glass	01875-500
Decane	Certified	500mL	Amber Glass	02128-500

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### Grades

### **Certified Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
o-Dichlorobenzene	Certified	1L	Amber Glass	02231-1
Diisopropylamine	Certified	4L	Amber Glass	02412-4
1,2-Dimethoxyethane	Certified	1L	Amber Glass	02430-1
1,2-Dimethoxyethane	Certified	4L	Amber Glass	02430-4
N,N-Dimethylacetamide	Certified	500mL	Amber Glass	D135-500
Ethylbenzene	Certified	1L	Amber Glass	02751-1
Ethylene Glycol	Certified	500mL	Amber Glass	E178-500
Ethylene Glycol	Certified	1L	Amber Glass	E178-1
Ethylene Glycol	Certified	4L	Amber Glass	E178-4
Ethylene Glycol	Certified	200L	Steel Drum	E178-200
Monomethyl Ether	Certified	500mL	Amber Glass	E182-500
Monomethyl Ether	Certified	4L	Amber Glass	E182-4
Formalin, Buffered, 10% (Acetate Buffer)	Certified	4L	Poly Bottle	SF99-4
Formalin, Buffered, 10% (Acetate Buffer)	Certified	20L	PolyPac	SF99-20
Heptane	Certified	1L	Amber Glass	03008-1
Heptane	Certified	4L	Amber Glass	03008-4
Heptane	Certified	115L	FisherPak	03008RS-115
Hexanes	Certified	500mL	Amber Glass	H291-500
Hexanes	Certified	4L	Amber Glass	H291-4
Hexanes	Certified	4L	SafeTin	H291S-4
Hexanes	Certified	20L	Steel Pail	H291-20
Hexanes	Certified	200L	Steel Drum	H291-200
Isoamyl Alcohol	Certified	500mL	Amber Glass	A393-500
Isoamyl Alcohol	Certified	4L	Amber Glass	A393-4
Isopropyl Acetate	Certified	1L	Poly Bottle	06111-1
Isopropyl Acetate	Certified	2.5L	Poly Bottle	06111-212
Isopropyl Ether	Certified	500mL	Amber Glass	E141-500
Isopropyl Ether	Certified	4L	Amber Glass	E141-4
Methylal	Certified	500mL	Amber Glass	M222-500
Methyl Acetate	Certified	500mL	Amber Glass	M203-500
Methyl Acetate	Certified	4L	Amber Glass	M203-4
2-Methylbutane	Certified	4L	Amber Glass	03551-4
1-Octanol	Certified	500mL	Amber Glass	A402-500
1-Octanol	Certified	4L	Amber Glass	A402-4
Pentane	Certified	4L	Amber Glass	04062-4
Pentane	Certified	19L	FisherPak	04062RS-19
Pentane	Certified	20L	Steel Pail	04062-20
Petroleum Ether	Certified	115L	FisherPak	E120SS-115
1-Propanol	Certified	500mL	Amber Glass	A414-500
1-Propanol	Certified	1L	Amber Glass	A414-1
1-Propanol	Certified	4L	Amber Glass	A414-4
1-Propanol	Certified	4L	SafeTin	A414S-4
1-Propanol	Certified	20L	Steel Pail	A414-20
1-Propanol	Certified	50L	BasicPak	A414RB-50
2-Propanol	Certified	1L	Amber Glass	A417-1
2-Propanol	Certified	4L	Amber Glass	A417-4
1,1,2,2-Tetrabromoethane	Certified	100mL	Amber Glass	A29-100
Tetrahydrofuran	Certified	500mL	Amber Glass	T397-500
Tetrahydrofuran	Certified	1L	Amber Glass	T397-500
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Grades

### **Certified Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Tetrahydrofuran	Certified	4L	Amber Glass	T397-4
Tetrahydrofuran	Certified	4L	Amber Glass/Safe-Cote	T397SK-4
Tetrahydrofuran	Certified	19L	BasicPak	T397RB-19
Tetrahydrofuran	Certified	20L	Steel Pail	T397-20
Tetrahydrofuran	Certified	50L	FisherPak	T397RS-50
Tetrahydrofuran	Certified	200L	Steel Drum	T397-200
Tetrahydrofuran	Certified	200L	BasicPak	T397RB-200
Tetrahydrofuran	Certified	200L	FisherPak	T397RS-200
Triethanolamine	Certified	500mL	Amber Glass	T407-500
Triethanolamine	Certified	1L	Amber Glass	T407-1
Triethanolamine	Certified	4L	Amber Glass	T407-4
o-Xylene	Certified	4L	Amber Glass	05081-4
p-Xylene	Certified	500mL	Amber Glass	05082-500
p-Xylene	Certified	4L	Amber Glass	05082-4

#### **Pesticide Grade Solvents**

Pesticide Grade Solvents are used for analysis of pesticide residue and in GC with electron capture detector. This grade is the economical alternative for environmental labs.

Meet or exceed ACS standards of purity for pesticide residue analysis
 Actual lot analysis on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	Pesticide	4L	Amber Glass	A40-4
Acetonitrile	Pesticide	4L	Amber Glass	A999-4
Chloroform (with Amylene Preservative)	Pesticide	4L	Amber Glass	C603-4
Cyclohexane	Pesticide	4L	Amber Glass	C553-4
Ethyl Acetate	Pesticide	4L	Amber Glass	E191-4
Ethyl Ether	Pesticide	4L	Amber Glass	E199-4
Hexanes	Pesticide	4L	Amber Glass	H300-4
Isooctane	Pesticide	4L	Amber Glass	0297-4
Methanol	Pesticide	4L	Amber Glass	A450-4
Methylene Chloride	Pesticide	4L	Amber Glass	D142-4
Pentane	Pesticide	4L	Amber Glass	P400-4
Petroleum Ether	Pesticide	4L	Amber Glass	P480-4
2-Propanol	Pesticide	4L	Amber Glass	A519-4

### Grades

#### **Spectranalyzed Solvents**

Fisher Chemical<sup>™</sup> Spectranalyzed<sup>™</sup> Solvents are for use in spectrophotometry — ultraviolet and visible wavelength detectors.

Meet all ACS specifications

Actual lot analysis on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	Spectranalyzed	1L	Amber Glass	A19-1
Acetone	Spectranalyzed	4L	Amber Glass	A19-4
Acetone	Spectranalyzed	115L	FisherPak	A19RS-115
1-Butanol	Spectranalyzed	4L	Amber Glass	A400-4
Carbon Disulfide	Spectranalyzed	500mL	Amber Glass	C573-500
Chloroform (Approx. 0.75% Ethanolas Preservative)	Spectranalyzed	1L	Amber Glass	C574-1
Chloroform (Approx. 0.75% Ethanolas Preservative)	Spectranalyzed	4L	Amber Glass	C574-4
Chloroform (Approx. 0.75% Ethanolas Preservative)	Spectranalyzed	4L	Amber Glass/Safe-Cote	C574SK-4
Cyclohexane	Spectranalyzed	1L	Amber Glass	C555-1
Cyclohexane	Spectranalyzed	4L	Amber Glass	C555-4
1,2-Dichloroethane	Spectranalyzed	4L	Amber Glass	E190-4
N,N-Dimethylformamide	Spectranalyzed	1L	Amber Glass	D131-1
N,N-Dimethylformamide	Spectranalyzed	4L	Amber Glass	D131-4
Dimethyl Sulfoxide	Spectranalyzed	1L	Amber Glass	D136-1
Ethyl Acetate	Spectranalyzed	4L	Amber Glass	E189-4
Ethyl Ether	Spectranalyzed	1L	Tin Can	E197-1
Ethyl Ether	Spectranalyzed	4L	Tin Can	E197-4
Glycerol	Spectranalyzed	1L	Amber Glass	G153-1
Glycerol	Spectranalyzed	4L	Amber Glass	G153-4
Heptane	Spectranalyzed	4L	Amber Glass	H340-4
Hexanes	Spectranalyzed	1L	Amber Glass	H334-1
Hexanes	Spectranalyzed	4L	Amber Glass	H334-4
Isooctane	Spectranalyzed	1L	Amber Glass	0300-1
Isooctane	Spectranalyzed	4L	Amber Glass	0300-4
Methanol	Spectranalyzed	1L	Amber Glass	A408-1
Methanol	Spectranalyzed	4L	Amber Glass	A408-4
Methanol	Spectranalyzed	4L	Amber Glass/Safe-Cote	A408SK-4
Methylene Chloride (Stabilized)	Spectranalyzed	1L	Amber Glass	D35-1
Methylene Chloride (Stabilized)	Spectranalyzed	4L	Amber Glass	D35-4
Pentane	Spectranalyzed	1L	Amber Glass	P393-1
2-Propanol	Spectranalyzed	1L	Amber Glass	A419-1
2-Propanol	Spectranalyzed	4L	Amber Glass	A419-4
Tetrahydrofuran	Spectranalyzed	4L	Amber Glass	T424-4
Toluene	Spectranalyzed	4L	Amber Glass	T330-4

Grades

#### **Scintanalyzed Solvents**

Fisher Chemical Scintanalyzed Solvents are specially formulated and tested for liquid scintillation counting.

Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Toluene	Scintanalyzed	4L	Amber Glass	T313-4
Toluene	Scintanalyzed	4L	Amber Glass/Safe-Cote	T313SK-4
Xylene	Scintanalyzed	4L	Amber Glass	X16-4

#### **Electronic Grade Solvents**

Electronic Grade Solvents are manufactured to ensure low levels of metal contamination and are suitable for use in electronics and circuit board manufacturing.

• Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	Electronic	4L	Amber Glass	A946-4
Methanol	Electronic	4L	Poly Bottle	A947-4
Trichloroethylene	Electronic	4L	Amber Glass	T403-4

#### **Histological Grade Solvents**

Histological Grade Solvents are specially prepared for use in the histology laboratory setting and are filtered for tissue processing applications.

• Certificate of Analysis available online or scan CofA QR code on label

Solvent		Purity Grade	Quantity	Packaging	Cat. No.
Acetone		Histological	1 gal.	Poly Bottle	A16F-1GAL
Acetone		Histological	4L	Poly Bottle	A16P-4
Acetone		Histological	4L	SafeTin	A16S-4
Acetone	1	Histological	20L	Steel Pail	A16S-20
Alcohol		Histological	1 gal.	Rectangular Poly Bottle	A962F-1GAL
Alcohol	82	Histological	4L	Amber Glass	A962-4
Alcohol		Histological	4L	Poly Bottle	A962P-4
Alcohol		Histological	4L	SafeTin	A962S-4
Alcohol		Histological	200L	Steel Drum	A962-200
Alcohol		Histological	200L	BasicPak	A962RB-200
Alcohol		Histological	200L	FisherPak	A992RS-200
1,4-Dioxane		Histological	4L	SafeTin	D56S-4
Ethanol, Anhydrous		Histological	1 gal.	Poly Bottle	A405F-1GAL
Ethanol, Anhydrous		Histological	4L	Poly Bottle	A405P-4
Ethanol, Anhydrous		Histological	20L	Steel Pail	A405-20
Ethanol, CDA19		Histological	1 gal.	Poly Bottle	A406F-1GAL
Ethanol, CDA19		Histological	4L	Poly Bottle	A406P-4
Ethanol, CDA19	1698	Histological	20L	Steel Pail	A406-20
Formaldehyde, 37% by Weight		Histological	1 gal.	Poly Bottle	F75F-1GAL
Formaldehyde, 37% by Weight	10-	Histological	1 gal.	Poly Bottle	F75P-1GAL
Formaldehyde, 37% by Weight		Histological	20L	PolyPac	F75P-20
Formalin Solution, 10%	1	Histological	4L	Poly Bottle	SF98-4
Formalin Solution, 10%		Histological	20L	PolyPac	SF98-20
Methanol		Histological	1 gal.	Poly Bottle	A433F-1GAL
Methanol		Histological	4L	Poly Bottle	A433P-4
Methanol		Histological	4L	SafeTin	A433S-4
Methanol		Histological	20L	Steel Pail	A433S-20
Methanol		Histological	200L	Steel Drum	A433S-200

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### Grades

### **Histological Grade Solvents (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
2-Propanol	Histological	1 gal.	Poly Bottle	A426F-1GAL
2-Propanol	Histological	4L	Poly Bottle	A426P-4
2-Propanol	Histological	4L	SafeTin	A426S-4
2-Propanol	Histological	20L	Steel Pail	A426S-20
2-Propanol	Histological	200L	Steel Drum	A426S-200
Tetrahydrofuran	Histological	500mL	Amber Glass	T400-500
Tetrahydrofuran	Histological	4L	Amber Glass	T400-4
Tetrahydrofuran	Histological	20L	Steel Pail	T400-20
Toluene	Histological	1 gal.	Poly Bottle	T326F-1GAL
Toluene	Histological	4L	Poly Bottle	T326P-4
Toluene	Histological	20L	Steel Pail	T326S-20
Xylene	Histological	1 gal.	Poly	X3F-1GAL
Xylene	Histological	1 gal.	Poly Bottle	X3P-1GAL
Xylene	Histological	4L	SafeTin	X3S-4
Xylene	Histological	20L	Steel Pail	X3S-20
Xylene	Histological	50L	BasicPak	X3RB-50
Xylene	Histological	200L	Steel Drum	X3S-200

#### Laboratory Grade Solvents

Laboratory grade solvents are of reasonable quality and purity for use in procedures where no official standards are required.

• Certificate of Analysis available online or scan CofA QR code on label

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Amyl Acetate	Laboratory	500mL	Amber Glass	A718-500
Amyl Acetate	Laboratory	4L	Amber Glass	A718-4
n-Butyl Phosphate	Laboratory	500mL	Amber Glass	B404-500
n-Butyl Phosphate	Laboratory	4L	Amber Glass	B404-4
Carbon Disulfide	Laboratory	2.5L	Glass	C183-212
Chlorobenzene	Laboratory	4L	Amber Glass	B254-4
Chlorobenzene	Laboratory	20L	Steel Pail	B254-20
Chlorobenzene	Laboratory	200L	FisherPak	B254RS-200
Cyclohexanone	Laboratory	4L	Amber Glass	C550-4
Ethanolamine	Laboratory	1L	Amber Glass	M251-1
Ethanolamine	Laboratory	4L	Amber Glass	M251-4
Ethylene Glycol Monoethyl Ether Acetate	Laboratory	4L	Amber Glass	E181-4
Ethylene Glycol Monoethyl Ether	Laboratory	1L	Amber Glass	E180-1
Ethylene Glycol Monoethyl Ether	Laboratory	4L	Amber Glass	E180-4
Ethylene Glycol Monoethyl Ether	Laboratory	20L	Steel Pail	E180-20
Ethyl Ether	Laboratory	1L	Aluminum Can	E134-1
Ethyl Ether	Laboratory	4L	Tin Can	E134-4
Ethyl Ether	Laboratory	20L	Steel Pail	E134-20
Ethyl Ether, Fat Extraction	Laboratory	4L	Tin Can	E492-4
Ethyl Ether, Fat Extraction	Laboratory	20L	Steel Pail	E492-20
Ethylene Glycol	Laboratory	4L	Amber Glass	E177-4
Ethylene Glycol	Laboratory	20L	Steel Pail	E177-20
Ligroine, 100% Heptane	Laboratory	4L	Amber Glass	03387-4
Ligroine, Hexane	Laboratory	20L	Steel Pail	03386-20
Methanol	Laboratory	4L	Amber Glass	A411-4
Methanol	Laboratory	20L	Steel Pail	A411-20
2-Octanol	Laboratory	500mL	Amber Glass	0269-500
Petroleum Ether	Laboratory	115L	FisherPak	E120SS-115

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Grades

#### Laboratory Grade Solvents (continued)

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
1-Propanol	Laboratory	50L	BasicPak	A414RB-50
2-Propanol	Laboratory	4L	Amber Glass	A415-4
2-Propanol	Laboratory	20L	Steel Pail	A415-20
1,1,2,2-Tetrabromoethane	Laboratory	500mL	Amber Glass	A33-500
1,1,2,2-Tetrabromoethane	Laboratory	4L	Amber Glass	A33-4
Tetrahydrofuran	Laboratory	19L	BasicPak	T397RB-19
Tetrahydrofuran	Laboratory	50L	FisherPak	T397RS-50
Tetrahydrofuran	Laboratory	200L	BasicPak	T397RB-200
Tetrahydrofuran	Laboratory	200L	FisherPak	T397RS-200
Toluene	Laboratory	4L	Amber Glass	T323-4
Toluene	Laboratory	20L	Steel Pail	T323-20
Triethylene Glycol	Laboratory	4L	Amber Glass	T346-4
Xylene	Laboratory	4L	Amber Glass	X4-4
Xylene	Laboratory	20L	Steel Pail	X4-20

#### **Technical Grade Solvents**

Technical Grade Solvents are of reasonable quality and purity for general laboratory use in procedures where no official standards are required.

Certificate of Analysis available online or scan CofA QR code on label

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

### Grades

### **Reagent Grade Solvents**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
n-Butyl Acetate	Reagent	1L	Amber Glass	B396-1
n-Butyl Acetate	Reagent	4L	Amber Glass	B396-4
n-Butyl Phthalate	Reagent	500mL	Amber Glass	D30-500
n-Butyl Phthalate	Reagent	4L	Amber Glass	D30-4
Chlorobenzene	Reagent	200L	FisherPak	B254RS-200
Cyclohexane	Reagent	4L	Amber Glass	02093-4
Cyclohexane	Reagent	20L	Steel Pail	02093-20
Cyclohexanol	Reagent	500mL	Amber Glass	C558-500
Cyclohexene (Contains 0.01% tert-Butylcresol as an Inhibitor)	Reagent	1L	Amber Glass	02111-1
Diethylene Glycol	Reagent	1L	Amber Glass	D49-1
Ethyl Acetoacetate	Reagent	500mL	Amber Glass	E146-500
Octane	Reagent	1L	Amber Glass	03980-1
Petroleum Ether	Reagent	115L	FisherPak	E120SS-115
1-Propanol	Reagent	50L	BasicPak	A414RB-50
Propylene Oxide	Reagent	1L	Amber Glass	04332-1
Tetrabutylammonium lodide (White Crystals)	Reagent	100g	Poly Bottle	06109-100
Tetrachloroethylene (Stabilized)	Reagent	4L	Amber Glass	04586-4
Tetrahydrofuran	Reagent	19L	BasicPak	T397RB-19
Tetrahydrofuran	Reagent	50L	FisherPak	T397RS-50
Tetrahydrofuran	Reagent	200L	BasicPak	T397RB-200
Tetrahydrofuran	Reagent	200L	FisherPak	T397RS-200
Triethylamine	Reagent	1L	Amber Glass	04885-1
Triethylamine	Reagent	4L	Amber Glass	04885-4
Triethylamine	Reagent	20L	Steel Pail	04885-20

#### **Multicompendial Solvents**

Multicompendial Solvents meet or surpass specifications 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).

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetone	NF/FCC	1L	Amber Glass	A11-1
Acetone	NF/FCC	4L	Amber Glass	A11-4
Acetone	NF/FCC	4L	SafeTin	A11S-4
Acetone	NF/FCC	20L	Steel Pail	A11-20
Acetone	NF/FCC	200L	Steel Drum	A11-200
Acetone	NF/FCC/EP	4L	Amber Glass	A9-4
Acetone	NF/FCC/EP	20L	Steel Pail	A9-20
Acetone	NF/FCC/EP	200L	Steel Drum	A9-200
Benzyl Alcohol	NF	500mL	Amber Glass	A395-500
Benzyl Alcohol	NF	4L	Amber Glass	A395-4
Benzyl Alcohol	NF/EP/BP	4L	Amber Glass	A392-4
Ethyl Acetate	NF	4L	Amber Glass	E124-4
Ethyl Acetate	NF	20L	Steel Pail	E124-20
Ethyl Acetate	NF/FCC	200L	FisherPak	E124RS-200
Formaldehyde (40% by Volume)	USP	4L	Poly Bottle	F77P-4
Formaldehyde (40% by Volume)	USP	20L	Rigid Poly Bottle/Corrugated Box	F77-20
Formaldehyde (40% by Volume)	USP	20L	PolyPac	F77P-20
Formaldehyde (40% by Volume)	USP	200L	Steel Drum/Poly Liner	F77-200

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Grades

## Multicompendial Solvents (continued)

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Glycerol	USP/FCC	500mL	Amber Glass	G31-500
Glycerol	USP/FCC	1L	Amber Glass	G31-1
Glycerol	USP/FCC	4L	Amber Glass	G31-4
Glycerol	USP/FCC	20L	Rigid Poly Bottle	G31-20
Glycerol	USP/FCC	200L	Poly Drum	G31-200
Glycerol	USP/FCC/EP/BP	4L	Amber Glass	G30-4
Glycerol	USP/FCC/EP/BP	20L	Rigid Poly Bottle/Corrugated Box	G30-20
Glycerol	USP/FCC/EP/BP	200L	Steel Drum	G30-200
Methanol	NF	500mL	Amber Glass	A413-500
Methanol	NF	4L	Amber Glass	A413-4
Methanol	NF	20L	Steel Pail	A413-20
Methanol	NF	200L	Steel Drum	A413-200
Pentane	Multicompendial	28L	FisherPak	P399RS-28
2-Propanol	USP	500mL	Amber Glass	A516-500
2-Propanol	USP	4L	Amber Glass	A516-4
2-Propanol	USP	20L	Steel Pail	A516-20
2-Propanol	USP	200L	Steel Drum	A516-200
Propylene Glycol	USP/FCC	1L	Amber Glass	P355-1
Propylene Glycol	USP/FCC	4L	Amber Glass	P355-4
Propylene Glycol	USP/FCC	20L	Steel Pail	P355-20
Propylene Glycol	USP/FCC	200L	Steel Drum	P355-200
Triethanolamine	NF	500mL	Amber Glass	T350-500
Triethanolamine	NF	4L	Amber Glass	T350-4

- F

## **Special Solvent Grades**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetonitrile, 50% (v/v)	For AOAC Method 992.22	500mL	Amber Glass	SA9125-500
Alcohol Reagent 20%	For AOAC Method 992.22	1L	Poly Bottle	SA9320-1
Alcohol Reagent 20%	For AOAC Method 992.22	4L	Poly Bottle	SA9320-4
Alcohol Reagent 20%	For AOAC Method 992.22	10L	Cubitainer	SA9320-10
Benzine (Petroleum Naphtha)	Reagent	20L	Steel Pail	B264-20
Carbon Disulfide (Low Benzene)	Reagent	500mL	Amber Glass	C185-500
Ethyl Alcohol Denatured	Proprietary Solvent	500mL	Amber Glass	A407-500
Ethyl Alcohol Denatured	Proprietary Solvent	1L	Amber Glass	A407-1
Ethyl Alcohol Denatured	Proprietary Solvent	4L	Amber Glass	A407-4
Ethyl Alcohol Denatured	Proprietary Solvent	4L	Poly Bottle	A407P-4
Ethyl Alcohol Denatured	Proprietary Solvent	4L	SafeTin	A407S-4
Ethyl Alcohol Denatured	Proprietary Solvent	4L	Amber Glass/Safe-Cote	A407SK-4
Ethyl Alcohol Denatured	Proprietary Solvent	19L	BasicPak	A407RB-19
Ethyl Alcohol Denatured	Proprietary Solvent	20L	Steel Pail	A407-20
Ethyl Alcohol Denatured	Proprietary Solvent	115L	BasicPak	A407RB-115
Ethyl Alcohol Denatured	Proprietary Solvent	200L	Steel Drum	A407-200
Ethyl Alcohol Denatured	Proprietary Solvent	200L	BasicPak	A407RB-200

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# Grades

## **Special Solvent Grades (continued)**

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
IPA (Isopropyl Alcohol), 70% (v/v)		500mL	Poly Bottle	A459-500
IPA (Isopropyl Alcohol), 70% (v/v)		1L	Poly Bottle	A459-1
IPA (Isopropyl Alcohol), 70% (v/v)		4L	Poly Bottle	A459-4
IPA (Isopropyl Alcohol), 70% (v/v)		20L	PolyPac	A459-20
Kerosene (Odorless)		4L	Amber Glass	K10-4
Kerosene (Odorless)		200L	Steel Drum	K10-200
Methanol	Low Water	4L	Amber Glass	A935-4
Methanol	Purge and Trap Suitable for Volatile Organic Residue Analysis	500mL	Amber Glass	A453-500
Methanol	Purge and Trap Suitable for Volatile Organic Residue Analysis	1L	Amber Glass	A453-1
2-Propanol	Low Water	4L	Amber Glass	A520-4
Stoddard Solvent		4L	Amber Glass	S457-4
Stoddard Solvent		200L	Steel Drum	S457-200
Water	DIUF	4L	Poly Bottle	W2-4
Water	DIUF	20L	PolyPac	W2-20
Water	Environmental Grade	1L	Amber Glass	W11-1
Water	Environmental Grade	4L	Amber Glass	W11-4
Water	Plasma Grade	500mL	LDPE Bottle	W9-500
Water	Plasma Grade	1L	LDPE Bottle	W9-1
Water	Plasma Grade	2L	LDPE Bottle	W9-2

### Life Sciences Research Grades

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Acetonitrile, Anhydrous	Septum-Sealed	50mL	Amber Glass	BP1165-50
Acetonitrile, Anhydrous	DNA Synthesis	4L	Amber Glass	BP1170-4
Acetonitrile, Anhydrous	DNA Synthesis	450mL	Amber Glass	BP1170-450
Acetonitrile, Anhydrous	DNA Synthesis	19L	NowPak	BP1170N-119
Acetonitrile, Anhydrous	DNA Synthesis	19L	NowPak	BP1170N-219
Acetonitrile, Anhydrous	DNA Synthesis	200L	FisherPak	BP1170RS-200
Acetonitrile, Anhydrous	DNA Synthesis	28L	FisherPak	BP1170RS-28
Acetonitrile, Anhydrous	DNA Synthesis	50L	FisherPak	BP1170RS-50
Acetonitrile, Anhydrous	DNA Synthesis	50L	Steel Drum	BP1170SS-50
Chloroform (Approx. 0.75% Ethanol as Preservative)	Molecular Biology	1L	Amber Glass	BP1145-1
Dimethyl Formamide	Sequencing	4L	Amber Glass	BP1160-4
Dimethyl Formamide	Sequencing	500mL	Amber Glass	BP1160-500
Dimethyl Formamide	Sequencing	19L	FisherPak	BP1160RS-19
Dimethyl Formamide	Sequencing	200L	FisherPak	BP1160RS-200
Dimethyl Formamide	Sequencing	28L	FisherPak	BP1160RS-28
Dimethyl Formamide	Sequencing	50L	FisherPak	BP1160RS-50
Dimethyl Formamide	Sequencing	50L	Steel Drum	BP1160SS-50
Dimethyl Sulfoxide		1L	Amber Glass	BP231-1
Dimethyl Sulfoxide		100mL	Amber Glass	BP231-100
Dimethyl Sulfoxide		4L	Amber Glass	BP231-4
Ethanol – 200 Proof	Molecular Biology	100mL	Amber Glass	BP2818-100
Ethanol – 200 Proof	Molecular Biology	4L	Amber Glass	BP2818-4
Ethanol – 200 Proof	Molecular Biology	500mL	Amber Glass	BP2818-500

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Grades

### Life Sciences Research Grades (continued)

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
Ethanol, Denatured, 70%	Molecular Biology	1 gal.	Plastic	BP8203-1GAL
70% Ethanol Solution	Molecular Biology	1L	Amber Glass	BP8201-1
70% Ethanol Solution	Molecular Biology	4L	Amber Glass	BP8201-4
70% Ethanol Solution	Molecular Biology	500mL	Amber Glass	BP8201-500
96% Ethanol Solution	Molecular Biology	1L	Amber Glass	BP8202-1
96% Ethanol Solution	Molecular Biology	4L	Amber Glass	BP8202-4
96% Ethanol Solution	Molecular Biology	500mL	Amber Glass	BP8202-500
Ethyl Acetate	Sequencing	1L	Amber Glass	BP1125-1
Ethyl Acetate	Sequencing	4L	Amber Glass	BP1125-4
Ethylene Glycol		1L	Amber Glass	BP230-1
Ethylene Glycol		4L	Amber Glass	BP230-4
Formamide	Molecular Biology	100mL	Amber Glass	BP227-100
Formamide	Molecular Biology	500mL	Amber Glass	BP227-500
Glycerol	Molecular Biology	1L	Amber Glass	BP229-1
Glycerol	Molecular Biology	4L	Amber Glass	BP229-4
Heptane	Sequencing	500mL	Amber Glass	BP1115-500
Isoamyl Alcohol	Molecular Biology	500mL	Amber Glass	BP1150-500
Isopropanol	Molecular Biology	1L	Amber Glass	BP2618-1
Isopropanol	Molecular Biology	2.5L	Amber Glass	BP2618-212
Isopropanol	Molecular Biology	4L	Amber Glass	BP2618-4
Isopropanol	Molecular Biology	500mL	Amber Glass	BP2618-500
Methanol	Sequencing	1L	Amber Glass	BP1105-1
Methanol	Sequencing	4L	Amber Glass	BP1105-4
N-Methylpyrrolidone	120 25	4L	Amber Glass	BP1172-4
N-Propanol	Sequencing	500mL	Amber Glass	BP1130-500
Pyridine	Sequencing	500mL	Amber Glass	BP1155-500
Tetrahydrofuran	Sequencing	1L	Amber Glass	BP1140-1
Water	Molecular Biology	1L	Poly Bottle	BP2819-1
Water	Molecular Biology	10L	Poly Bottle	BP2819-10
Water	Molecular Biology	100mL	Poly Bottle	BP2819-100
Water	Molecular Biology	20L	PolyPak	BP2819-20
Water	Molecular Biology	4L	Poly Bottle	BP2819-4
Water	Microbial Cell Culture	1L	Poly Bottle	BP2820-1
Water	Microbial Cell Culture	100mL	Poly Bottle	BP2820-100
Water	Microbial Cell Culture	500mL	Poly Bottle	BP2820-500
Water (DEPC-treated, For RNA work)	Molecular Biology	1L	Poly Bottle	BP561-1



# Fisher BioReagents Ethanol Solutions

- Molecular Biology grades are DNAse, RNAse, and Protease free
- BP8203 is perfect for decontaminating molecular biology labs
- Pair with Invitrogen kits

## Grades

### **Extra-Dry Solvents**

Our extra-dry solvents provide excellent performance for moisture-sensitive applications and ship in septum sealed bottles for extended use. We recommend the use of 18 to 21 gauge needles for optimum results.

We offer extra-dry solvents in three different grades:

- Standard grade: Suitable for most applications
- Molecular sieves grade: Stored over molecular sieves for prolonged shelf life
- Supreme grade: Filtered through 0.2µm filters for dust-free applications

Compound	Standa	ard Grade	Molecular	Sieves Grade	Supre	CAS No.	
	Cat. No.	Pack Size	Cat. No.	Pack Size	Cat. No.	Pack Size	
Acetone, 99.8%					AC32680-1000 AC32680-0010	100mL 1L	67-64-1
Acetonitrile, 99.9%	AC61022-1000 AC61022-0010	100mL 1L	AC36431-1000 AC36431-5000 AC36431-0010 AC36431-0025	100mL 500mL 1L 2.5L	AC32681-0010 AC32681-0010 AC32681-0010 AC32681-0025 AC44839-1000	100mL 1L 2.5L 4 × 25mL	75-05-8
Anisole, 99%					AC42925-1000 AC42925-0010	100mL 1L	100-66-3
Benzyl Alcohol, 98+%					AC39688-1000 AC39688-0010	100mL 1L	100-51-6
Bis(2-methoxyethyl) Ether, 99+%					AC39721-1000 AC39721-0010	100mL 1L	111-96-6
1-Butanol, 99+%					AC39896-1000 AC39896-0010	100mL 1L	71-36-3
1-Butanol, 99.4%	AC61025-1000	100mL					71-36-3
sec-Butanol, 99%	AC61026-1000 AC61026-0010	100mL 1L					78-92-2
2-Butanone, 99.5%					AC39695-1000 AC39695-0010	100mL 1L	78-93-3
n-Butyl Acetate, 99+%					AC42923-1000 AC42923-0010	100mL 1L	123-86-4
tert-Butyl Methyl Ether, 99.0%	AC61027-1000	100mL					1634-04-4
tert-Butyl Methyl Ether, 99+%			AC37522-1000 AC37522-0010	100mL 1L	AC37521-1000 AC37521-0010	100mL 1L	1634-04-4
Chlorobenzene, 99.8%	211	~			AC39697-1000 AC39697-0010	100mL 1L	108-90-7
1-Chlorobutane, 99.5%					AC43382-1000 AC3382-0010	100mL 1L	109-69-3
Chloroform, 99.9%, Stabilized	AC61028-1000	100mL	AC36432-1000 AC36432-0010	100mL 1L	AC32682-1000 AC32682-0010 AC32682-0025	100mL 1L 2.5L	67-66-3
Cyclohexane, 99.5%	AC61029-1000	100mL	AC36466-1000 AC36466-0010 AC36466-0025	100mL 1L 2.5L	AC32683-1000 AC32683-0010 AC32683-0025	100mL 1L 2.5L	110-82-7
Cyclopentane, 95+%		(	-		AC39768-1000 AC39768-0010	100mL 1L	287-92-3
Cyclopentyl Methyl Ether, 99.5%, Stabilized					AC39725-1000 AC39725-0010	100mL 1L	5614-37-9
Decahydronaphthalene, 99%, Mixture of cis and trans	1.000	1			AC40617-1000 AC40617-0010	100mL 1L	91-17-8
Decane, 99%					AC43460-1000 AC43460-0010	100mL 1L	124-18-5
Di-n-butyl Ether, 99+%	and the second		X	100	AC39691-1000 AC39691-0010 AC39691-0025	100mL 1L 2.5L	142-96-1
1,2-Dichlorobenzene, 98+%					AC39696-1000 AC39696-0010	100mL 1L	95-50-1
1,2-Dichloroethane, 99.8%	1	51			AC32684-1000 AC32684-0010 AC32684-0025	100mL 1L 2.5L	107-06-2
Dichloromethane, 99.9%, stabilized			AC34846-1000 AC34846-5000 AC34846-0010 AC34846-0025	100mL 500mL 1L 2.5L	AC32685-1000 AC32685-0010 AC32685-0025 AC44837-1000	100mL 1L 2.5L 4 × 25mL	75-09-2
Dichloromethane, 99.9%	AC61030-0010	1L			1		75-09-2
Diethoxymethane, 99+%, stabilized			AC44305-1000	100mL	1000000 1005	400	462-95-3
Diethyl Ether, 99.5%, stabilized			AC36433-1000 AC36433-5000 AC36433-0010 AC36433-0025	100mL 500mL 1L 2.5L	AC32686-1000 AC32686-0010 AC32686-0025 AC44842-1000	100mL 1L 2.5L 4 × 25mL	60-29-7
N,N-Dimethylacetamide, 99.5%			AC37523-1000 AC37523-0010	100mL 1L	AC39635-1000 AC39635-0010 AC39635-0025	100mL 1L 2.5L	127-19-5
N,N-Dimethylacetamide, 99.8%	AC61031-1000	100mL			4040070 4007	100	127-19-5
Dimethyl Carbonate, 99+%					AC42873-1000 AC42873-0010	100mL 1L	616-38-6



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Fisher Scientific Canada: 1-800-234-7437 | fishersci.ca/chemicals

Grades

### **Extra-Dry Solvents (continued)**

The AcroSeal<sup>™</sup> tamper-evident dual-cap system features an ergonomic top cap and a quadrant-style bottom cap that simultaneously provide enhanced protection and easy access to a large volume of solvent.

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

Compound	Stand	ard Grade	Molecular	Sieves Grade	Supre	CAS No.	
	Cat. No.	Pack Size	Cat. No.	Pack Size	Cat No.	Pack Size	
N,N-Dimethylformamide, 99.8%	AC61032-1000 AC61032-0010	100mL 1L	AC34843-1000 AC34843-5000 AC34843-0010 AC34843-0025	100mL 500mL 1L 2.5L	AC32687-1000 AC32687-0010 AC32687-0025 AC44838-1000	100mL 1L 2.5L 4 × 25mL	68-12-2
1,4-Dioxane, 99.5%			AC36434-1000 AC36434-0010 AC36434-0025	100mL 1L 2.5L			123-91-1
1,4-Dioxane, 99.8%, Stabilized	AC61512-1000 AC61512-0010 AC61516-1000	100mL 1L 100mL			AC32689-1000 AC32689-0010 AC32689-0025	100mL 1L 2.5L	123-91-1
1,3-Dioxolane, 99.8%, Stabilized with 75 ppm BHT					AC43156-1000 AC43156-0010	100mL 1L	646-06-0
Dodecane, 99%					AC43459-1000 AC43459-0010	100mL 1L	112-40-3
Ethanol, 99.5%, Absolute					AC39769-1000 AC39769-0010 AC39769-0025	100mL 1L 2.5L	64-17-5
Ethyl Acetate, 99.9%	AC61034-1000	100mL	AC36435-1000 AC36435-0010 AC36435-0025	100mL 1L 2.5L	AC32690-1000 AC32690-0010 AC32690-0025	100mL 1L 2.5L	141-78-6
Ethylbenzene, 99.8%					AC43380-1000 AC43380-0010	100mL 1L	100-41-4
Ethylene Glycol Dimethyl Ether, 99%	AC61035-1000 AC61035-0010	100mL 1L					110-71-4
Ethyl Formate, 98+% 1-Heptane, 96+%	AC61036-1000	100mL			AC42924-1000	100mL	109-94-4
n-Heptane, 99+%	A001030-1000	TOUTIL	AC36436-1000 AC36436-0010 AC36436-0025	100mL 1L 2.5L	AC32691-1000 AC32691-0010	100mL 1L	142-82-5
n-Hexadecane, 99%	30				AC43614-1000 AC43614-0010	100mL 1L	544-76-3
n-Hexane, 96+%					AC32692-1000 AC32692-2500 AC32692-0010 AC32692-0010 AC32692-0025	100mL 250mL 1L 2.5L	110-54-3
n-Hexane, 97%			AC36437-1000 AC36437-0010	100mL 1L			110-54-3
Hexanes, 99.9%, Mixture of Isomers	AC61037-1000 AC61037-0010	100mL 1L					92112-69-1
Hexyl Alcohol, 99%				1C	AC43386-1000 AC43386-0010	100mL 1L	111-27-3
sopropanol, 99.5%	AC61043-1000	100mL	AC36440-1000 AC36440-0010 AC36440-0025	100mL 1L 2.5L			67-63-0
sopropanol, 99.8%	1E	826			AC32696-1000 AC32696-0010 AC32696-0025	100mL 1L 2.5L	67-63-0
Methanol, 99.8%	AC61098-1000 AC61040-0010	100mL 1L	AC36439-1000 AC36439-5000 AC36439-0010 AC36439-0025	100mL 500mL 1L 2.5L	AC44841-1000	4 × 25mL	67-56-1
Methanol, 99.9%	60	A			AC32695-1000 AC32695-0010 AC32695-0025	100mL 1L 2.5L	67-56-1
2-Methoxyethanol, 99+%					AC39689-1000 AC39689-0010	100mL 1L	109-86-4
Vethyl Acetate, 99+%					AC37183-1000 AC37183-0010 AC37183-0025	100mL 1L 2.5L	79-20-9
2-Methylbutane, 99%					AC39722-1000 AC39722-0010	100mL 1L	78-78-4
3-Methyl-1-Butanol, 99%					AC43387-1000 AC43387-0010	100mL 1L	123-51-3

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# Grades

## Extra-Dry Solvents (continued)

Compound	Standa	rd Grade	Molecular	Sieves Grade	Supren	CAS No.	
	Cat. No.	Pack Size	Cat. No.	Pack Size	Cat No.	Pack Size	
Methylcyclohexane, 98%					AC39724-1000 AC39724-0010	100mL 1L	108-87-2
2-Methyl-1-Propanol, 99%					AC39895-1000 AC39895-0010	100mL 1L	78-83-1
1-Methyl-2-Pyrrolidinone, 99.5%	AC61041-1000	100mL	AC36438-1000 AC36438-0010 AC36438-0025	100mL 1L 2.5L	AC32693-1000 AC32693-0010 AC32693-0025	100mL 1L 2.5L	872-50-4
Methyl Sulfoxide, 99.7%	AC61042-1000 AC61042-0010 AC61097-1000	100mL 1L 100mL	AC34844-1000 AC34844-5000 AC34844-0010 AC34844-0025	100mL 500mL 1L 2.5L	AC32688-1000 AC32688-0010 AC32688-0025	100mL 1L 2.5L	67-68-5
2-Methyltetrahydrofuran, 99+%, Stabilized			AC39663-1000 AC39663-0010	100mL 1L	AC39662-1000 AC39662-0010 AC39662-0025	100mL 1L 2.5L	96-47-9
2-Methyltetrahydrofuran, 99+%, Stabilizer Free					AC39720-0010	1L	96-47-9
n-Nonane, 99%					AC43563-1000	100mL	111-84-2
n-Octane, 99+%					AC39690-1000 AC39690-0010	100mL 1L	111-65-9
1-Octanol, 99%					AC43458-1000 AC43458-0010	100mL 1L	111-87-5
n-Pentane, 99+%					AC39723-1000 AC39723-0010	100mL 1L	109-66-0
Petroleum Ether, Boiling Range 40-60°C, Water <50 ppm					AC39692-1000 AC39692-0010	100mL 1L	64742-49-0
1-Propanol, 99.5%	1.00				AC39694-1000 AC39694-0010	100mL 1L	71-23-8
Pyridine, 99.0%	AC61099-1000 AC61044-0010	100mL 1L					110-86-1
Pyridine, 99.5%	V.L		AC36442-1000 AC36442-0010 AC36442-0025	100mL 1L 2.5L	AC33942-1000 AC33942-0010 AC33942-0025	100mL 1L 2.5L	110-86-1
Tetrahydrofuran, 99.5%, Stabilized			AC34845-1000 AC34845-5000 AC34845-0010 AC34845-0025	100mL 500mL 1L 2.5L			109-99-9
Tetrahydrofuran, 99.85%, Stabilized	OV				AC32697-1000 AC32697-0010 AC32697-0025 AC44836-1000	100mL 1L 2.5L 4 × 25mL	109-99-9
Tetrahydrofuran, 99.9%	AC61045-0010	1L					109-99-9
Tetrahydrofuran, 99.9%, Stabilized	AC61091-1000 AC61090-0010	100mL 1L					109-99-9
Toluene, 99.8%	AC61095-1000 AC61046-0010	100mL 1L					108-88-3
Toluene, 99.85%	1		AC36441-1000 AC36441-5000 AC36441-0010 AC36441-0025	100mL 500mL 1L 2.5L	AC32698-1000 AC32698-0010 AC32698-0025 AC44840-1000	100mL 1L 2.5L 4 × 25mL	108-88-3
2,2,4-Trimethylpentane, 99.5%					AC32694-1000 AC32694-0010	100mL 1L	540-84-1
m-Xylene, 99%	AC61047-1000	100mL			AC15893-1000 AC15893-0010	100mL 1L	108-38-3
o-Xylene, 99%					AC44302-1000 AC44302-0010	100mL 1L	95-47-6
Xylenes, 98+%, Mixed Isomers	113			)	AC39693-1000 AC39693-0010	100mL 1L	1330-20-7

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Grades

### **Deuterated NMR Solvents**

Thermo Fisher Scientific offers a range of high-quality deuterated products for all routine synthesis and structural analysis needs. The products include solvents and standards in a variety of packaging options, isotopic enrichment and tetramethylsilane concentrations.

- Isotopic Enrichment: Ranges from 99 atom % D for routine use to 99.97 atom % D for the most demanding applications
- Tetramethylsilane concentration: In addition to deuterated solvents without any internal standards, we offer a range of solvents containing either 0.03% v/v or 1% v/v tetramethylsilane (TMS) as an internal standard
- · Packaging Options: To best suit your application needs our deuterated products come in septum sealed bottles, regular bottles and ampules
- · Tetramethylsilane: Two NMR grade container sizes offered for manual addition of this internal standard

Solvent	Purity Grade	Quantity	Packaging	Cat. No.
1,1,2,2-Tetrachloroethane-d2	99 atom% D	20mL	Amber Glass	AC13358-0200
Acetic-d3 Acid-d	99.5 atom% D	5mL	Amber Glass	AC16621-0050
Acetone-d6	99.5 atom% D	50mL	Amber Glass	AC17490-0500
Acetone-d6, Packaged in 0.75mL Ampules	100 atom% D	7.5mL	Ampules	AC32064-0075
Acetone-d6, Packaged in 0.75mL Ampules	100 atom% D	7.5mL	Ampules	AC32061-0075
Acetonitrile-d3	99.9 atom% D	10mL	Amber Glass	AC35139-0100
Acetonitrile-d3	99 atom% D	50mL	Amber Glass	AC16623-0500
Acetonitrile-d3, Packaged in 0.75mL Ampules	99.95 atom% D	7.5mL	Ampules	AC32065-0075
Chloroform-d	99.8 atom% D	100mL	Amber Glass	AC16625-1000
Chloroform-d, Contains 0.03 v/v% TMS	99.8 atom% D	100mL	Amber Glass	AC20956-1000
Chloroform-d, Contains 1 v/v% TMS	99.8 atom% D	100mL	Amber Glass	AC16626-1000
Chloroform-d	100 atom% D	100mL	Amber Glass	AC16627-1000
Chloroform-d, Packaged in 0.75mL Ampules	100 atom% D	7.5mL	Ampules	AC32068-0075
Deuterium Oxide	100 atom% D	100mL	Glass Bottle	AC16631-1000
Deuterium Oxide, Packaged in 0.75mL Ampules	100 atom% D	7.5mL	Ampules	AC32070-0075
Dichloromethane-d2	99.6+ atom% D	25mL	Glass Bottle	AC17611-0250
Dichloromethane-d2, Packaged in 0.75mL Ampules	99.8 atom% D	7.5mL	Ampules	AC32072-0075
Methanol-d4	99.5 atom% D	50mL	Glass Bottle	AC16635-0500
Methanol-d4, Packaged in 0.75mL Ampules	99.8 atom% D	7.5mL	Ampules	AC32075-0075
Methanol-d4, Contains 0.03 v/v% TMS	99.8 atom% D	50mL	Glass Bottle	AC32992-0500
Methanol-d4, Contains 0.03 v/v% TMS, in 0.75mL Ampules	99.8 atom% D	7.5mL	Ampules	AC35147-0075
Methanol-d4, Packaged in 0.75mL Ampules	00 atom% D	7.5mL	Ampules	AC35146-0075
Methyl Sulfoxide-d6	99.9 atom% D	100mL	Glass Bottle	AC16629-1000
Methyl Sulfoxide-d6, Packaged in 0.75mL Ampules	99.9 atom% D	7.5mL	Ampules	AC32077-0075
Methyl Sulfoxide-d6, Contains 0.03 v/v% TMS, in 0.75mL Ampules	99.9 atom% D	7.5mL	Ampules	AC35254-0075
Methyl Sulfoxide-d6, Packaged in 0.75mL Ampules	100 atom% D	7.5mL	Ampules	AC32076-0075
N,N-Dimethylformamide-d7	99.5 atom% D	10mL	Glass Bottle	AC18360-0100
N,N-Dimethylformamide-d7, Packaged in 0.75mL Ampules	99.5 atom% D	7.5mL	Ampules	AC32073-0075
Pyidine-d5, Packaged in 0.75mL Ampules	99.8 atom% D	7.5mL	Ampules	AC35147-0075
Pyidine-d5, Contains 0.03 v/v% TMS	100 atom% D	10mL	Glass Bottle	AC35149-0100
Tetrahydrofuran-d8	99.5 atom% D	10mL	Glass Bottle	AC18013-0100
Tetrahydrofuran-d8, Packaged in 0.75mL Ampules	99.5 atom% D	7.5mL	Ampules	AC32078-0075
Toluene-d8	99+ atom% D	25mL	Glass Bottle	AC16639-0250
Trifluoroacetic Acid-d	99.5 atom% D	25mL	Glass Bottle	AC32531-0250
Trifluoroacetic Acid-d, Packaged in 1mL Ampules Tetramethylsilane	99.5 atom% D	10mL	Ampules	AC32533-0100
Tetramethylsilane, NMR grade	99.9+%	25g	Glass Bottle	AC13847-0250
Tetramethylsilane, NMR grade	99.9+%	100g	Glass Bottle	AC13847-1000

## **Technical References**

# **Chemical Resistance and Physical Properties of Plastics**

### **Resin Codes**

ECTFE:	Ethylene-chlorotrifluoroethylene copolymer	PFA:
ETFE:	Ethylenetetrafluoroethylene	PMMA:
FEP:	Fluorinated ethylene propylene	PMP:
FLPE:	Fluorinated high-density polyethylene	PP:
FLPP:	Fluorinated polypropylene	PS:
HDPE:	High-density polyethylene	PSF:
LDPE:	Low-density polyethylene	PTFE:
NYL:	Nylon (polyamide)	PUR:
PPCO:	Polypropylene copolymer	PVC:
PC:	Polycarbonate	PVDF:
PETG:	Polyethylene terephthalate copolyester	TPE:
PK:	Polyketone	XLPE:

Perfluoroalkoxy	
Polymethyl methacrylate	
Polymethylpentene	
Polypropylene	
Polystyrene	
Polysulfone	
Polytetrafluoroethylene	
Polyurethane	
Polyvinyl chloride	
Polyvinylidene fluoride	
Thermoplastic elastomer	
Cross-linked high-density polyethylene	
	Polymethyl methacrylate Polymethylpentene Polypropylene Polystyrene Polysulfone Polytetrafluoroethylene Polyurethane Polyvinyl chloride Polyvinylidene fluoride Thermoplastic elastomer

etone XLPE: 0

### **Chemical Resistance Summary**

Classes of substances; temperature 68°F (20°C)	ECTFE/ETFE	FEP/PTFE/PFA	FLPE	HDPE/XLPE	LDPE	NYL	PC	PETG	PK	PMMA	PMP	PP/PPC0	PS	PSF	PUR	PVC	PVDF	TPE <sup>†</sup>
Acids, weak or dilute	E	E	E	E	E	F	E	E	E	G	E	E	E	Е	G	Е	E	E
Acids*, strong or	G	E	E	Е	E	Ν	Ν	Ν	G	Ν	Е	E	F	G	F	Е	Е	F
concentrated																		
Alcohols, aliphatic	E	E	E	E	E	Ν	G	E	G	Ν	E	E	E	G	F	Е	Е	E
Aldehydes	E	E	G	G	G	F	F	Ν	E	G	G	G	Ν	F	G	Ν	Е	Ν
Bases	E	E	F	E	E	F	Ν	Ν	G	F	E	E	E	Е	Ν	Е	Е	E
Esters	E	E	E	G	G	Е	Ν	Ν	Е	N	G	G	Ν	Ν	Ν	Ν	G	Ν
Hydrocarbons, aliphatic	E	E	Е	G	F	Е	F	E	Е	G	F	G	Ν	G	Е	Е	Е	Ν
Hydrocarbons, aromatic	Е	E	E	G	F	Е	Ν	Ν	Е	Ν	F	F	Ν	Ν	Ν	Ν	Е	Ν
Hydrocarbons,	E	E	G	F	Ν	G	Ν	Ν	Е	Ν	Ν	F	Ν	Ν	Ν	Ν	Ν	Ν
halogenated								1	-	- el			0	-				
Ketones	G	E	Ε	G	G	Е	Ν	Ν	Е	Ν	F	G	Ν	Ν	Ν	Ν	Ν	Ν
Oxidizing agents, strong	F	Е	F	F	F	Ν	Ν	Ν	G	Ν	F	F	Ν	G	Ν	G	G	Ν

\* For oxidizing acids, see table entry "Oxidizing agents, strong."

† TPE gaskets

### **Fisher Chemical Safety Spill Kits**

To simplify ordering the appropriate kit, the following symbols are used to identify chemicals that require special cleanup materials and the type of cleanup kit required. These are one-time-use kits containing everything necessary for spill cleanup.



Mercury Warning; this product contains Mercury.

Acid Spills Emergency Cleanup Kit for neutralizing and absorbing up to 1L of acid. (Fisher Chemical Catalog Number 18-061A)

Caustic Spill Emergency Cleanup Kit for neutralizing and absorbing up to 1L of caustic material. (Fisher Chemical Catalog Number 18-061C)

Solvent Spill Emergency Cleanup Kit for neutralizing and absorbing up to 1L of solvent. (Fisher Chemical Catalog Number 18-061B)

Do not store strong oxidizing agents in plastic labware except if made of FEP, PFA, or PTFE. Other plastics will become brittle after prolonged exposure.

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

Use these charts as general guides only. They are recommendations, not guarantees, of fitness for particular uses. Test materials under actual conditions first before using them for your applications.

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.

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Technical References

# **Technical Solvent Chart**

Solvent	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.
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
1-Butanol	215	117.7	0.8098	1.3972	-88.6	3.9	-	2.98	35	74.12
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
N,N-Dimethylformamide	268	153.0	0.9440	1.4280	-61.0	6.4	-	0.92	58	73.09
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
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	-X	0.1	20	-	-18	-
2-Propanol	205	82.3	0.7855	1.3772	-90.0	3.9	0.63	2.40	-12	60.10
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

## **Technical References**

How to Use This Chart

# **Chemical Resistance of Labware Materials**

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 7 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 basic models of interaction that cause these changes are: (1) chemical attack on the polymer chain, with resultant reduction in physical properties, including oxidation; reaction of functional groups in or on the chain; and depolymerization; (2) physical change, including absorption of solvents, resulting in softening and swelling of the plastic; permeation of solvent through the plastic; or dissolution in a solvent; and (3) stress-cracking from the interaction of a "stress-cracking agent" with molded-in or external stresses. The reactive combination of compounds of two or more classes may cause a synergistic or undesirable chemical effect. Other factors affecting chemical resistance include: temperature. pressure, internal or external stresses (such as centrifugation), and length of exposure to and concentration of the chemical. As temperature increases, resistance to attack decreases.

### \*Warning!

Do not store strong oxidizing agents in plastic containers except those made of FEP, PFA, or PTFE. Other plastics will become brittle after prolonged exposure.

						off	· / x.							ste	» /
CHEMICAL	IDP	с <sub>Н</sub>	Pt of	PPCO PMP		elefterer erst	HEITE PC	PW	3	·	14 <sub>85</sub>	M		aintess ste	55 Ceranic
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 EE	EE EG	EG EG	EE EG	EE GG	EE EE	EG	FN NN	EE EE	EE	EE FF
Acetic acid, 50% Acetone	NN	NN	EE	EE	EE	GF	NN	NN	NN	NN	GG 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 Allyl alcohol	EE	EE EE	EE	EE EG	EE EE	EE	NN GF	NN GF	NN GF	_	EE GF	EG 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 EE	EE EE	EE	NN EE	EG EE	GF EE	EE EE	GF EE	FF EG	EE EG	EE EE	EE
Ammonium acetate, sat. Ammonium glycolate	EG	EE	EG	EG	EE	EE	GF	EE	GG	EE	EE	GG	EU		
Ammonium hydroxide, 5%	ĒĒ	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 n-Amyl acetate	EE GF	EE EG	EE GF	EE GF	EE	EE	EG NN	EG NN	EE NN	EE	GG NN	NN EE	EE	EE	EG
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 Benzoic acid, sat.	FN EE	NN EE	GF EG	GF EG	EE	EG	NN EG	NN EG	NN FF	EE	NN GG	EE NN	GG EG	EE	EE
Benzyl acetate	EG	EE	EG	EG	EE	EG	FN	NN	NN		NN	EG	GG	EE	EE
Benzyl alcohol	ŇŇ	FN	NN	ŇŇ	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 NN	NN	EE	GN	NN	NN NN	NN NN	EE	NN	EG	GG GG	GG EE	GG EE
Bromoform Butadiene	NN NN	FN	NN	NN NN	EE	GF EE	NN NN	FN	NN	EE EE	NN NN	FF	GG	EE	EE
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
sec-Butyl alcohol	EG	EE	EG	EG	EE	EE	GF	GG	GF	EE	GG	NN	EE	EE	EE
tert-Butyl alcohol Butyric acid	EG NN	EE FN	EG NN	EG NN	EE	EE	GF FN	EG GN	GF GG	EE EE	EE NN	NN FN	EE 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	EG	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 Carbon tetrachloride	NN FN	NN GF	NN GF	NN NN	EE EE	EF EE	NN NN	NN GF	NN NN	EE EE	NN NN	EG EE	EE GG	EE EE	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) Chloroacetic acid	GN EE	GF EE	FN EG	GN EG	EE	EE	GF FN	EG FN	NN NN	EE E-	NN GN	NN NN	FF GG	EE EE	EE
p-Chloroacetophenone	EE	EE	EE	EE	EE	EE	NN	NN	NN		NN	EG			
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 Citric acid, 10%	NN EE	FN EE	NN EE	NN EE	EE	EG EE	GF EG	NN GG	FF EE	EE	NN EG	GF NN	EE 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			
o-Dichlorobenzene p-Dichlorobenzene	FN FN	FF GF	FN GF	FN GF	EE	EF EF	NN NN	NN NN	NN NN	EE	NN NN	EG EG	GG GG	EE	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 Diethylene glycol	EE	EE	EE	EG EE	EE	EE	FN GF	GN FN	FF GG	EG EE	NN GG	EE 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
1,4-Dioxane Dipropylene glycol	GF EE	GG EE	GF EE	GF EE	EE EE	EF EE	GF GF	FN GF	GF GG	NN	NN	EF EE	GG	EE	EE
Ether	NN	FN	NN	NN EE	EE	EG	NN	FN	NN	EG	EE 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 Ethyl benzoate	FN FF	GF GG	FN GF	FN GF	EE EE	GF EG	NN NN	NN NN	NN NN	NN	NN NN	EE EE	GG	_	
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 Ethylene glycol	GN EE	GF EE	FN EE	NN EE	EE EE	EE EE	NN GF	NN EE	NN EE	EE	NN EE	EG EE	GG GG	EE 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 Formaldehyde, 10%	FN EE	GN EE	FN EE	FN EG	EG EE	EF EE	GF EG	EG GF	NN GF	EE	NN FN	NN GF	EG EE	EE	EE
Tornaluenyue, 1070	CC	CE	EE.	EG	CE	L CE	EU	ur	ur	EE .	FIN	ur	EE	CE	C

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Symte. et al. 37%         EG         EE         EG         EF         EG         FE         EE         EG         FE         EE							ERF	A Sta							55	el /
Some         Constraint          Constraint	CHEMICAL	JF	& / s	DPL DF	AIPPCD DE	AR E	BPIT L	THE OF	5 / 6N	5. se	5 / 5	Wh Pe	, / 🕯	₹ <b>1</b> - 5	ainles.	1855 CBIBIN
Sec         EG	Formaldehyde, 40%	EG	EE	EG	EG	EE	EE	EG	GF	GF	EE	NN	GF	EE	EE	EE
Find:         Conditional Sign: 100%         EG         EG         EG         FF         TE         EG         FF         TE         FF         FF         FF         FF         FF         FF         FF         TE         FF         FF         FF         TE         FF																
United         FN         GF         GE         GF         FE         FE <th< td=""><td>Formic acid, 98 to 100%</td><td>EG</td><td>EE</td><td>EG</td><td>EF</td><td>EE</td><td>EE</td><td>EF</td><td>FN</td><td>FF</td><td>EE</td><td>FF</td><td></td><td>GG</td><td>EE</td><td>EE</td></th<>	Formic acid, 98 to 100%	EG	EE	EG	EF	EE	EE	EF	FN	FF	EE	FF		GG	EE	EE
Jacobing         PN         GG         GF         FF         EE         FF         GN         FF         EE         FE         EE         <																
SynchronEE <th< td=""><td>Gasoline</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Gasoline															
	Glacial acetic acid															
Hardman         NN         OF         FN         EE         EE         FN         ER         EE         <																
hybricholine acid, 10:5%         EE         EE         EE         EE         EE         EE         EE         NN         NN         EE         EE           hybricholine acid, 25%         EE         EE         EE         EE         EE         EE         FE         NN         NN         FE         FE         FE         FE         FE         NN         NN         FE         FE         FE         FE         FE         NN         NN         FE	Hexane															
sphcacharma         cpcc         EE         EE         EG         EE         FNN         NNN         EE         EE <td>Hydrochloric acid, 1 to 5%</td> <td></td> <td></td> <td></td> <td></td> <td>EE</td> <td></td> <td></td> <td></td> <td>EE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Hydrochloric acid, 1 to 5%					EE				EE						
hybolistance, dr. %         EG         EG         EG         EG         FG         FG         FG         FG         NN         NN <td>Hydrochloric acid, 20%</td> <td></td>	Hydrochloric acid, 20%															
Hydrogan parxxis, 3%         EE         EE <td>Hydrofluoric acid, 4%</td> <td></td>	Hydrofluoric acid, 4%															
	Hydrofluoric acid, 48%															
Hydrogen provide, 90%,         EG         EE         EG         EE         EE         EE         EG         EE         EG         EE         EG         EE         EG         EE         EG         NN         NN         NN         EE         EE         EE         EE         EE         EG         NN         NN         NN         EE         EE<																
$ \begin{array}{c} \beging a charded \\ \beging a charded $																
	Isobutyl alcohol	EE	EE	EE	EG	EE	EE	EG	EG	EG		GG	NN	EE	EE	EE
	Isopropyl acetate															
											EE				EE	EE
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Kerosene	FN	GG	GF	GF	EE	GF	EE	EE	GF		NN	EE	EE	EE	
	Lactic acid, 3%															
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$											GF			66	EE	EE
Methy forpy functional         NN         EE         GG         EE         E            Methy forpy functional         GN         EE         NN         NN         NN         EN         NN         NN         EE         EE         NN         NN         NN         NN         EE         EE         NN         EE         EE<	Methyl alcohol										EE			EE	EE	EE
	Methyl ethyl ketone															
															EE	EE
Ninc acid, 10 10%         EE         EE         EE         EE         EE         EE         EE         EE         EG         FF         GN         NN         EG         EG         NN         EE	Methylene chloride														EE	EE
Nitric acid, 20%         GN         GN         FN         GN         NN         FE         EE         EE         GF         GF         NN         NN         FG         FE         EE         NN         NN         GF         NN         NN         FG         GF         EE         EE         NN         NN         NN         FF         EE         EE         FE         EE         NN         NN         NN         FF         GF         FE         EE	Mineral oil															
Nitrobanzane         NN         FN         NN         NN         NN         FF         GG         EE	Nitric acid, 70%															
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Nitrobenzene		FN	NN		EE	EG	NN	NN	NN	EN	NN	FF	GG	EE	
Percharcia caid Percharcia caid Percharcia caid Percharcia caid Percharcia caid Percharcia caid, Percharcia CPU Per	Ozone															
	Perchloric acid					GF										
Phosphoric acid, 1to 5% EE																
Phosphore acid, 85%																
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Phosphoric acid, 85%		EE	EG	EG	EE	EE	EG		EE	EE	EG				
Portasci n hydroxide, conc. PE EE																CE
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $																
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Propane gas										EE					
Resonantial set $EE$ $EE$ $EE$ $EE$ $EE$ $EE$ $EE$ $EE$											ENI				EE	EE
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$											FIN				_	
Salicylic acid, powderEEEEEEEEEGEE	Resorcinol, 5%	EE	EE	EE	EE	EE	EF	GF	GN	NN	-	GF	NN	-	-	-
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$																
Salt solutions, metallicEE <td></td>																
Silver nitrate EG EE EG EE EE EE EE EE EE EE EG EG EE EE	Salt solutions, metallic	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GG	FF		_	
Sodium acetate, sat.EE <t< td=""><td>Silver acetate</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Silver acetate															
Sodium hydroxide, 1%EE <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>																
Sodium hypochlorite, 15%EEEEEEEEGFEE <td>Sodium hydroxide, 1%</td> <td>EE</td> <td>EE</td> <td>EE</td> <td>EE</td> <td>EE</td> <td>EE</td> <td>FN</td> <td>EE</td> <td>EE</td> <td>EE</td> <td>GG</td> <td>EE</td> <td>GG</td> <td>GE</td> <td>GE</td>	Sodium hydroxide, 1%	EE	EE	EE	EE	EE	EE	FN	EE	EE	EE	GG	EE	GG	GE	GE
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sodium hydroxide, 50% to sat.															
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		FF	EE FF	GF FF	EE FF	EE FF			EE	EE GG	FF					FF
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sulfuric acid, 1 to 6%	EE	EE	EE	EE	EE	EE	EE	EG	EE	EE		NN	FN	EE	EG
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sulfuric acid, 20%															
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $																
Sulfur dioxide, wet or dryEE<	Sulfur dioxide, liq., 46 psi	NN	FN	NN	NN	EE	EG	GN	FN	GG	EE	NN	NN		NN	NN
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Sulfur dioxide, wet or dry	EE		EE	EE	EE		EG	EG	GG	GE	FN	NN	FN		EE
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$														FF	FF	FE
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tetrahydrofuran															
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Thionyl chloride	NN	NN	NN	NN	EE	EE	NN	NN	NN	_	NN	NN	NN	EE	EE
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														EE	EE	EE
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$														GG	FF	EE
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Trichloroethylene	NN	FN	NN	NN	EE	EG	NN	NN	NN		NN	EE			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Triethylene glycol										-			-	-	-
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$											FF			FF	FF	FF
Urea         EE         EE <th< td=""><td>Undecyl alcohol</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td>_</td></th<>	Undecyl alcohol														_	_
Kylene GN GF FN FN EE EG NN NN NN EE NN EE GG EE EE	Urea	EE	EE	EE	EG	EE	EE	NN	GN	FF	EE	EG	EE		EE	EE
															FF	EE
	Zinc stearate	EE	EE	EE	EE	EE	EG	EE	EG	EE	EE	EE	EE	EE	EE	EE

### \*Warning!

The plastic resin information in these tables (does not include SS, glass, or ceramic) has been provided by the Thermo Scientific<sup>™</sup> Nalgene<sup>™</sup> team and is reprinted with their permission. It should be used ONLY as a guide for selecting labware for testing.

Test the labware for 72 hours under expected or proposed conditions of use, BEFORE putting into service. Test with care to avoid injury or property damage.

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Korea

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#### AMERICAS

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### EUROPE

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# Spain es.fisher@thermofisher.com

es.fishersci.com Tel: 902 239 303 Fax: 902 239 404

### ASIA

India qfc.customercare@thermofisher.com sales.fsk@thermofisher.com fishersci.in Tel: +91-22-6680 3000 Fax: +91-22-6680 3001

### OCEANIA

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New Zealand NZinfo@thermofisher.com thermofisher.co.nz Tel: 0800-933-966 Fax: +64 9 980 6788

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Tel: 466 798 230 Fax: 466 435 008 Italy it.fisher@thermofisher.com it fishersci com Tel: 02 950 59 478

Fax: 02 950 59 479 Switzerland info.ch@thermofisher.com ch.fishersci.com

# Tel: 056 618 41 11 Fax: 056 618 41 41

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Denmark kundeservice@thermofisher.com dk.fishersci.com Tel: 70 27 99 20 Fax: 70 27 99 29

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Fax: 800-926-1166

The Netherlands nl.info@thermofisher.com nl fishersci com Tel: 020 487 70 00 Fax: 020 487 70 70

United Kingdom fsuk.sales@thermofisher.com fisher.co.uk Tel: 01509 555500 Fax: 01509 555111

Singapore enquiry.sg@thermofisher.com fishersci.com.sg Tel: (65) 6873 6006 Fax: (65) 6873 5005

### Finland

fisher.fi@thermofisher.com fi.fishersci.com Tel: 09-802 76 280 Fax: 09-802 76 235 Norway

fisher.no@thermofisher.com no fishersci com Tel: 22 95 59 59 Fax: 22 95 59 40

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fr.fisher@thermofisher.com fr.fishersci.com Tel: 03 88 67 14 14 Fax: 03 88 67 11 68

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Portugal pt.fisher@thermofisher.com pt.fishersci.com Tel: 21 425 33 50 Fax: 21 425 33 51



17-2039 JJ BN040317CH24