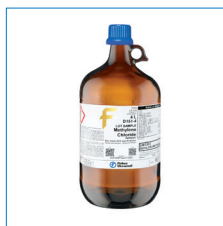


# Chromatography: Sample Preparation Workflow



## Chemicals

From sample preparation to separation, Fisher Chemical Optima high-purity solvents, additives, and solvent blends have set the standard of excellence for consistent, reproducible performance for all your chromatography applications.

Solvents and Solvent Blends	Cat. No.
Acetonitrile, Optima Grade, for HPLC and GC, 4L	A996-4
Methanol, Optima Grade, for HPLC, 4L	A454-4
Water, Optima Grade, for HPLC, 4L	W7-4
Water with 0.1% FA, HPLC Grade, 4L	HB523-4
Methylene Chloride, Optima Grade, for HPLC and GC, 4L	D151-4
Hexanes, Optima Grade, for HPLC and GC, 4L	H303-4

Additives and Salts	Cat. No.
o-Phosphoric Acid, HPLC Grade, 500mL	A260-500
TFA, Optima Grade, LC/MS Grade, 10mL	A116-10X1AMP
Acetone, Optima Grade, for HPLC and GC, 4L	A929-4
Acetic Acid, Glacial, HPLC Grade, 500mL	A35-500
Magnesium Sulfate, Anhydrous, Certified, 3kg	M65-3
Sodium Sulfate, Anhydrous, Certified ACS, 1kg	S415-1
Sodium Chloride, Certified ACS, 3kg	S271-3
Sodium Acetate Trihydrate, Certified ACS, 3kg	S209-3

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## SPE Cartridges, Digestion Kits, SPE Plates, and Syringe Filters

Choose from a broad range of solid-phase extraction (SPE) consumables and syringe filters to solve your sample preparation challenges, including sample and throughput constraints.

### Extraction

Thermo Scientific HyperSep Cartridges deliver greater reproducibility and recovery.

Description	Cat. No.
PEP Cartridges, 30mg, 3mL	03-150-634
SCX Cartridges, 30mg, 3mL	03-150-640
SAX Cartridges, 30mg, 3mL	03-150-646

### Digestion

Get fast and simple protein digestion with Thermo Scientific SMART Digest Kits.

Description	Cat. No.
Trypsin Kit	03-150-404
Trypsin Kit, Magnetic Bulk Resin	03-375-364

### Concentration

Thermo Scientific SOLA $\mu$  Plates help you get clean, robust extractions with low sample and solvent volumes.

Description	Cat. No.
HRP 96-Well Plates	60-209-001
SCX 96-Well Plates	60-209-002
SAX 96-Well Plates	60-209-003
10mg HRP 96-Well Plates	03-150-394
10mg SCX 96-Well Plates	03-150-395
10mg SAX 96-Well Plates	03-150-396

### Clean up

Thermo Scientific Titan3 Syringe Filters prevent sample leakage, increasing confidence in your results.

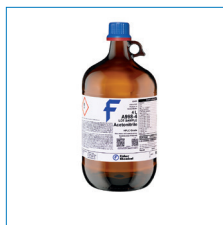
Description	Cat. No.
Filters with Pre-Filter, 30mm, 0.2 $\mu$ m	14-823-287
Filters with Pre-Filter, 30mm, 0.45 $\mu$ m	14-823-296
Filters, 30mm, 0.45 $\mu$ m	03-050-492
Filters, 17mm, 0.2 $\mu$ m	03-050-371
Filters, 17mm, 0.45 $\mu$ m	14-823-291

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Acclaim, Accucore, Chromacol, Fisher Chemical, GC Resolv, HyperSep, Hypersil GOLD, LinerGOLD, Optima, SMART Digest, SOLA $\mu$ , SureStop, Synchronis, Target2, Thermo Scientific, Titan3, TRACE, TraceGOLD, VANQUISH, WebSeal

# Chromatography: HPLC Reverse-Phase Workflow



## Chemicals

Fisher Chemical Optima HPLC solvents and additives are manufactured in facilities with an ISO 9001:2015-certified quality system to ensure optimum quality and product uniformity for your HPLC reverse-phase applications.

Solvents and Solvent Blends	Cat. No.
Acetonitrile, Optima Grade, for HPLC and GC, 4L	A996-4
Methanol, Optima Grade, for HPLC, 4L	A454-4
Water, Optima Grade, for HPLC, 4L	W7-4
Water with 0.1% TFA, for HPLC, 4L	HB513-4
Water with 0.1% FA, for HPLC, 4L	HB523-4
Isopropanol, Optima Grade, for HPLC, 4L	A464-4

Additives	Cat. No.
Acetic Acid, Optima Grade, LC/MS, 50mL	A113-50
TFA, Optima Grade, LC/MS Grade, 10mL	A116-10X1AMP
o-Phosphoric Acid, HPLC Grade, 500mL	A260-500
Ammonium Hydroxide, Optima Grade, 250mL	A470-250
Triethylamine (TEA), HPLC, 100mL	O4884-100
Heptane Sulfonic Acid, Na Salt, HPLC	O313-100
1-Octane Sulfonic Acid, Sodium Salt	O0028-100

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## Syringe Filters, Cartridges, Plates, Vials, and Columns

Let innovative Thermo Scientific technology remove uncertainty from your results.

### Sample Preparation

#### Clean Up

Thermo Scientific Titan3 Syringe Filters can prevent sample leakage, increasing confidence in your results.

Description	Cat. No.
Filters with Pre-Filter, 30mm, 0.2µm	14-823-287
Filters with Pre-Filter, 30mm, 0.45µm	14-823-296
Filters, 30mm, 0.45µm	03-050-492
Filters, 17mm, 0.2µm	03-050-371
Filters, 17mm, 0.45µm	14-823-291

#### Extract

Thermo Scientific HyperSep Cartridges deliver greater reproducibility and recovery.

Description	Cat. No.
Retain PEP Cartridges, 30mg, 3mL	03-150-634
Retain SCX Cartridges, 30mg, 3mL	03-150-640
Retain SAX Cartridges, 30mg, 3mL	03-150-646

#### Concentrate

Get clean, highly reproducible sample extracts with lower elution volumes using Thermo Scientific SOLAµ Solid-Phase Extraction (SPE) Plates.

Description	Cat. No.
HRP 96-Well Plates	60-209-001
SCX 96-Well Plates	60-209-002
SAX 96-Well Plates	60-209-003

### Sample Handling

Choose from a range of Thermo Scientific microplates and vials that produce precise results and unmatched consistency.

WebSeal Microplates	Cat. No.
96-Well Non-Coated Plastic Microplates	03-252-401
SureStop Vials and Kits	Cat. No.
Autosampler Kits, Clear, 9mm	03-170-331
Vials, Clear, 2mL	03-376-601
Vials, Amber, 2mL	03-376-602
Vials, Clear, 2mL, PTFE/Rubber Septa	03-376-604
Vials, Clear, 2mL, PTFE/Silicone Septa	03-376-606
Vials, Amber, 2mL, PTFE/Silicone Septa	03-377-300
Vials, Clear, 200µL Fused Insert, PTFE/Silicone Septa	03-060-050
Vials, Clear Glass, 1.7mL, PTFE/Silicone Septa	03-060-052

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### Separation

Choose from a range of columns that optimize separations and provide enhanced retention or changes in elution order.

Hypersil GOLD Columns	Cat. No.
C18 HPLC Column, 3µm, 150 x 4.6mm	25003154630
C18 HPLC Column, 1.9µm, 50 x 2.1mm	25002052130
Vanquish UHPLC Column, 1.9µm, 100 x 2.1mm	03-051-471
Phenyl HPLC Column, 3µm, 150 x 4.6mm	03-051-191
aQ Polar Endcapped LC/MS Column, 1.9µm, 50 x 4.6mm	03-170-552
Acclaim Columns	Cat. No.
C18 HPLC and LC/MS Column, 2.2 – 5µm, 2.1 x 100mm	DX068982
Polar Advantage II LC/MS and RSLC Column, 2.2µm, 2.1 x 100mm	DX068990
C30 LC/MS Column, 5µm, 4.6 x 250mm	DX075718
Accucore Columns	Cat. No.
HPLC and RP/MS Column, 2.6µm, 2.1 x 100mm	17-626-102130
C18 HPLC/UHPLC Column, LC/MS, 2.6µm, 2.1 x 100mm	17-126-102130
aQ Polar Endcapped HPLC Column, 2.6µm, 2.1 x 100mm	17-326-102130
Biphenyl HPLC/UHPLC Column, 2.6µm, 2.1 x 100mm	03-251-529

# Chromatography: HPLC Normal-Phase Workflow



## Chemicals

Fisher Chemical Optima HPLC solvents and additives are manufactured in facilities with an ISO 9001:2015-certified quality system to ensure optimum quality and product uniformity for your HPLC normal-phase applications.

Solvents and Solvent Blends	Cat. No.
Methanol, Optima Grade, for HPLC, 4L	A454-4
n-Hexane, 95%, Optima Grade, for HPLC and GC/MS, 4L	H306-4
Hexanes, Optima Grade, for HPLC and GC, 4L	H303-4
Chloroform, Stabilized with Amylene, Optima Grade, for HPLC and GC, 4L	C297-4
n-Heptane, 99%, Optima Grade, for HPLC and GC, 4L	H360-4
Isopropanol, Optima Grade, for HPLC, 4L	A464-4
Water, Optima Grade, for HPLC, 4L	W7-4
Acetonitrile, Optima Grade, for HPLC and GC, 4L	A996-4
Ethyl Acetate, Optima Grade, for HPLC and GC, 4L	E196-4
Water with 0.1% Formic Acid, for HPLC, 4L	HB523-4

Additives	Cat. No.
TFA, Optima Grade, LC/MS Grade, 10mL	A116-10X1AMP
o-Phosphoric Acid, HPLC Grade, 500mL	A260-500
Ammonium Hydroxide, Optima Grade, 250mL	A470-250
Triethylamine (TEA), HPLC, 100mL	O4884-100
Tetrahydrofuran, Optima Grade, for HPLC, 4L	T427-4
Ammonium Fluoride, Certified ACS, 100g	A665-100

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## Syringe Filters, Cartridges, Plates, Vials, and Columns

Let innovative Thermo Scientific technology remove uncertainty from your results.

### Sample Preparation

#### Clean Up

Thermo Scientific Titan3 Syringe Filters can prevent sample leakage, increasing confidence in your results.

Description	Cat. No.
Filters with Pre-Filter, 30mm, 0.2µm	14-823-287
Filters with Pre-Filter, 30mm, 0.45µm	14-823-296
Filters, 30mm, 0.45µm	03-050-492
Filters, 17mm, 0.2µm	03-050-371
Filters, 17mm, 0.45µm	14-823-291

#### Extract

Thermo Scientific HyperSep Cartridges deliver greater reproducibility and recovery.

Description	Cat. No.
Retain PEP Cartridges, 30mg, 3mL	03-150-634
Retain SCX Cartridges, 30mg, 3mL	03-150-640
Retain SAX Cartridges, 30mg, 3mL	03-150-646

#### Concentrate

Get clean, highly reproducible sample extracts with lower elution volumes using Thermo Scientific SOLAµ Solid-Phase Extraction (SPE) Plates.

Description	Cat. No.
HRP 96-Well Plates	60-209-001
SCX 96-Well Plates	60-209-002
SAX 96-Well Plates	60-209-003

### Sample Handling

Choose from a range of Thermo Scientific microplates and vials that produce precise results and unmatched consistency.

SureStop Vials and Kits	Cat. No.
Autosampler Kits, Clear, 9mm	03-170-331
Vials, Clear, 2mL	03-376-601
Vials, Amber, 2mL	03-376-602
Vials, Clear, 2mL, PTFE/Rubber Septa	03-376-604
Vials, Clear, 2mL, PTFE/Silicone Septa	03-376-606
Vials, Amber, 2mL, PTFE/Silicone Septa	03-377-300
Vials, Clear, 200µL Fused Insert, PTFE/Silicone Septa	03-060-050
Vials, Clear Glass, 1.7mL, PTFE/Silicone Septa	03-060-052

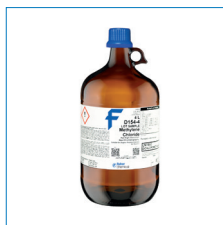
Visit [fishersci.com/thermochrom](http://fishersci.com/thermochrom) or [fishersci.ca/thermochrom](http://fishersci.ca/thermochrom) to see all HPLC normal-phase products.

### Separation

Choose from a range of bonded and non-bonded normal-phase columns that are ideal for the retention and separation of lipophilic compounds.

Hypersil GOLD Columns	Cat. No.
Hypersil GOLD LC Column, 5µm, 4.6 x 250mm	25-105-254030
Hypersil GOLD LC Column, 1.9µm, 2.1 x 100mm	25-102-102130
Hypersil GOLD PEI HILIC LC Column, 5µm, 4.6 x 250mm	26-505-254630
Hypersil GOLD PEI HILIC LC Column, 3µm, 2.1 x 150mm	26-503-152130
Accucore 150 Amide HILIC LC Column, 2.6µm, 2.1 x 150mm	03-452-150
Accucore Urea HILIC LC Column, 2.6µm, 2.1 x 100mm	03-452-125
Accucore HILIC LC Column, 2.6µm, 2.1 x 150mm	17-526-152130
Acclaim HILIC-10 LC Column, 3µm, 4.6 x 150mm	DX074257
Acclaim Mixed-Mode HILIC-1 LC Column, 5µm, 4.6 x 150mm	DX066843
Acclaim Mixed-Mode HILIC-1 LC Column, 5µm, 4.6 x 250mm	DX066844
Synchronis HILIC LC Column, 1.7µm, 2.1 x 100mm	03-050-348
Synchronis Silica LC Column, 5µm, 4.6 x 250mm	97-005-254630

# Chromatography: GC Workflow



## Chemicals

From sample preparation to separation, Fisher Chemical GC Resolv solvents and solvent blends have set the standard of excellence for consistent, reproducible GC performance.

Solvents and Solvent Blends	Cat. No.
N,N-Dimethylformamide, DMF, GC Headspace	D1331
Dimethyl Sulfoxide, DMSO, GC Headspace	D1391
N,N-Dimethylacetamide, DMAC, GC Headspace	D1601
1-Methyl-2-Pyrrolidone, NMP, GC HEADSPACE	N140-1
Water, GC Headspace	W101
Methanol, Purge Trap	A4531
Tetrahydrofuran, Optima Grade	T4274
Methylene Chloride, Optima Grade	D151-4

Solvents and Solvent Blends	Cat. No.
Acetonitrile, Optima Grade	A996-4
Hexanes, GC Resolv Grade	H3074
Methanol, GC Resolv Grade	A4574
Ethyl acetate, Optima Grade	E196-4

Visit the Workflows section of [fishersci.com/fisherchemical](http://fishersci.com/fisherchemical) or [fishersci.ca/fisherchemical](http://fishersci.ca/fisherchemical) to see more GC products.

## Syringe Filters, Cartridges, Vials, and Columns

Choose these GC solutions for your most complex separations. Pharmaceutical, industrial, food, environmental, and other fields rely on these products to improve processes and protect people and the environment from harmful contaminants.

### Sample Preparation

#### Clean Up

Ensure cleaner sample extracts with robust Thermo Scientific Target2 GMF (glass microfiber) Syringe Filters.

Description	Cat. No.
Syringe Filters, 30mm, 3.1µm, 100/pk	03-376-224

#### Extract

Thermo Scientific HyperSep Cartridges deliver greater reproducibility and recovery.

Description	Cat. No.
Dispersive Extraction Products, 50mL	03-152-613
Dispersive Clean-Up Products, 15mL	03-150-309
C18 Cartridges, 75mL	03-251-292
Verify AX Cartridges, 6mL	03-251-313
Aminopropyl Cartridges, 3mL	03-251-169
C18 Cartridges, 75mL	03-251-292
Verify CX Cartridges, 3mL	60-108-777

### Sample Handling

Save time during sample preparation and reduce the risk of contamination using Thermo Scientific vials, available with flat or round bottoms and screw-thread or crimp-cap tops.

Description	Cat. No.
Autosampler Vial Kits, Clear, 9mm, 100/Pack	03-170-331
Chromacol GOLD-Grade Inert Vials, 11mm, Clear, 2mL	03-251-445
Crimp Caps, Aluminum, 11mm, Red PTFE/White Silicone Septa, 100/Pack	06-406-19D
Headspace Vials, 18mm, Clear Glass,	14-824-365
Screw Caps, 18mm, Blue Silicone/ Natural PTFE Septa	03-378-621
Vials, 9mm, Amber Glass	03-377F
Screw Caps, 9mm, Blue, Red PTFE/ White Silicone Septa	03-376-481
Vials, 9mm, Amber, with 300µL Fused Insert	13-622-257
Screw Caps, 9mm, Blue, Clear PTFE/ Blue Silicone Septa	60180516
Vials, 9mm, Clear, with 200µL Fused Insert	03-060-058

### Separation

Thermo Scientific TraceGOLD Fast GC Columns are shorter and smaller than conventional GC columns for faster analysis with the same separation.

Description	Cat. No.
TG-5SILMS Guard Column with SafeGuard, 0.25µm, 0.25mm x 30m	03-155-047
TG-OCP I Column, 0.25µm, 0.25mm x 30m	26078-1420
TG-5SiIMS Column, 0.25µm, 0.25mm x 30m	26096-1420
TG-PAH Column, 0.25µm, 0.25mm x 30m	26055-0470
TG-XLBMS Column, 0.25µm, 0.25mm x 30m	26079-1420
TR-FAME Column, 0.2µm, 0.25mm x 100m	03-052-622
TRACE Columns for Drugs of Abuse, 0.25mm x 15m	26AF130P
LinerGOLD Splitless Straight GC Liner, Quartz Wool, 4 x 78.5mm	03-151-660
LinerGOLD Splitless Straight GC Liner, No Packing, 5 x 105mm	45350033
LinerGOLD GC Liner, PTV Baffle (Siltek), 2 x 120mm	45-3T2-120

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