

## HPLC Accessories

### Mobile Phase Degassing / Filtration



Supelco Mobile Phase Degassing System

#### Eliminates:

- Flow instabilities
- Detector noise
- Baseline drift
- Expensive helium tanks
- Sparging problems

Degasses up to four solvents at one time. The Supelco Mobile Phase Degassing System removes dissolved gases from the mobile phase. The mobile phase passes through a gas-permeable membrane inside a vacuum chamber, where dissolved gases are pulled out of the solution. Special tubing, which eliminates regassing from ambient sources, carries the mobile phase from the degasser to the pump. Includes 12 1/3 m of tubing and 8 fittings.

CE approved.

#### SPECIFICATIONS

Number of Channels:	4
Degassing Efficiency (25°C):	8.1 ppm oxygen reduced to 0.5 ppm at 1 mL/min or 1 ppm at 4 mL/min
Dead Volume/Channel:	15 mL
Maximum Flow/Channel:	10 mL/min
Power Requirements:	115 VAC/240 VAC ±10%, 50/60 Hz

DESCRIPTION	CAT. NO.	PRICE
Supelco Mobile Phase Degassing System	55020	



Mobile Phase Reservoir System

This convenient system is made entirely of inert parts: glass, Tefzel, PEEK, and TFE Teflon. Includes 10 1/3 m of 1/8" OD Teflon tubing, a PEEK bottom-of-the-bottle filter/sparger, a plug, and 1-liter or 2-liter safety-coated bottle.

DESCRIPTION	CAT. NO.	PRICE
<b>MOBILE PHASE RESERVOIR SYSTEM</b>		
with 1-liter Bottle	55060-U	
with 2-liter Bottle	55061	
<b>ACCESSORIES AND REPLACEMENT PARTS</b>		
Bottom-of-the-Bottle Filter/Sparger, GL-45	55058	
Luer Plug	54983	
Luer to 1/4-28 Adapter	58722	
Safety-Coated Bottle, 1-Liter, GL-45	59324	
Safety-Coated Bottle, 2-Liter, GL-45	59323	
Replacement Cap for 1- or 2-Liter Reservoir System, 3 holes, GL-45	55062	
Caps for 1- or 2-Liter Bottle <sup>2</sup> (pk. of 12), solid, GL-45	23170-U	
Cap for Narrow-Mouth Bottle (fits GL-38) <sup>3</sup> , 3 holes	A622	
TFE Teflon Tubing, 10 1/3 m x 1/8" OD	58703	
Flangeless Fittings for 1/8" Tubing (pk. of 5)	58686	
Two-Way Shut-Off Valve, 1/4-28 threads	56704	
Bottom-of-the-Bottle Filter/Sparger, GL-38	A437	

<sup>1</sup> Cap has a Tefzel core with 3 holes (same as in 55060-U).

<sup>2</sup> Solid cap, no hole.

<sup>3</sup> Use with solvent bottles to eliminate transfer step.

## HPLC Accessories

### Mobile Phase Degassing / Filtration



#### Supelco Mobile Phase Filtration Apparatus

Protect your instrument and columns by removing particles and gases from solvents and other mobile phase components. Nylon 66 membrane filters are compatible with all solvents commonly used in HPLC.

Filtration Apparatus 1 (connects to 1000mL sidearm flask) - Includes 250mL glass reservoir, funnel base and stopper, clamp, stainless steel holder and screen, 10 Teflon gaskets, 50 Nylon 66 filters (47mm, 0.45µm pores).

Filtration Apparatus 2 (connects to aspiration line) - Includes 250mL glass reservoirs (B4/45 tapered funnel bases), B4/45 tapered 1000mL flask and glass cap, clamp, stainless steel holder and screen, 10 Teflon gaskets, 50 Nylon 66 filters (47mm, 0.45µm pores).

DESCRIPTION	CAT. NO.	PRICE
<b>SUPELCO MOBILE PHASE FILTRATION APPARATUS</b>		
Filtration Apparatus 1	58061	
Filtration Apparatus 2	58062-U	

#### REPLACEMENT GLASS PARTS

For Filtration Apparatus 1		
Reservoir, 250mL	58063	
Reservoir, 500mL	58074	
Funnel Base and Stopper	58064	
For Filtration Apparatus 2		
Tapered Funnel Base	58068	
Tapered Flask, 1000mL	58070-U	
Tapered Flask, 2000mL	58075	
Cap for Flask	58071	

#### REPLACEMENT FILTER PARTS FOR BOTH APPARATUS

Filter Holder and Screen, SS	58065	
Gaskets, Teflon (pk. of 10)	58066	
Filter, Nylon 66, 47mm (pk. of 50)		
0.45µm pores	58067	
0.20µm pores	58060-U	
Clamp, Spring Action	58053	
Vacuum Flask, 1000mL, with Sidearm	Z290459-1EA	

#### Membrane Filter Disks, fits all 47mm Filtration Units

DESCRIPTION	PORE SIZE (µm)	QTY.	CAT. NO.	PRICE
Nylon 66	0.45	50	58067	
	0.20	50	58060-U	
Teflon	1.0	10	58097	
	1.5	10	58086	
Cellulose	0.22	100	58188	

#### Nylon 46 Membrane Filters

Hydrophilic, compatible with a wide range of chemicals.

DIAMETER (mm)	PORE SIZE (µm)	QTY.	CAT. NO.	PRICE
25	0.45	100	Z290815-100EA	
47	0.2	100	Z290807-100EA	
47	0.45	100	Z290793-100EA	
90	0.45	25	Z290785-25EA	

#### Solvents and Solutions Compatible with Nylon 66 and Nylon 46 Filters

##### RECOMMENDATIONS

###### ACIDS

Acetic acid, 1%

###### BASES

Potassium hydroxide, 6N

###### ALCOHOLS

Amyl alcohol

Benzyl alcohol

Butyl alcohol

Butyl Cellosolve

Ethanol

Ethylene glycol

Glycerine (glycerol)

Isobutyl alcohol

Isopropanol

Methanol

Methyl Cellosolve

Propanol

###### SOLVENTS

Acetone

Acetonitrile

Amyl acetate

Benzene<sup>1</sup>

Bromoform

Butyl acetate

Carbon tetrachloride<sup>1</sup>

Cellosolve (2-ethoxyethanol)

Chloroform<sup>1</sup>

Cyclohexane

Cyclohexanone

Diethylacetamide

Dimethylformamide

Dimethylsulfoxide

Dioxane

Ethyl ether

Ethylene dichloride

Formaldehyde

Freon 113

Gasoline

Hexane

Isopropyl acetate

Kerosene

Methyl acetate

Methyl ethyl ketone

Methyl isobutyl ketone

Nitrobenzene

Methylene chloride<sup>1</sup>

Pentane

Perchloroethylene

Tetrahydrofuran<sup>1</sup>

Trichloroethylene

Toluene<sup>1</sup>

Trichlorethane

Triethylamine

Xylene<sup>1</sup>

Note: Controlled vacuum is recommended to prevent boiling of volatile solvents.

<sup>1</sup> Limited stability in neat solvent.

## HPLC Accessories

### Mobile Phase Degassing / Filtration



Aura Unit  
58094



59321

#### Aura Mobile Phase Filter/Degasser Unit

Attaches to any vacuum line.

Easy-to-use Aura filter/degasser units simultaneously degas solvents and buffers and remove particles. You can eliminate spurious peaks caused by gas bubbles in your detector, and prevent particle damage to check valves and other system components. A clean mobile phase also prolongs column life.

Each unit includes a Teflon filtering/degassing assembly, ten 1.5µm Teflon filter membranes, 40"/1m x 1/4" OD Teflon tubing, and a heavy wall, graduated, borosilicate glass solvent reservoir. Choose either a 1-liter or a 2-liter reservoir.

The standard taper Teflon joint on the filtering assembly fits into Erlenmeyer flasks and other containers. The filtering assembly accepts any standard 47mm filter membrane and is compatible with all solvents used in HPLC. Use with appropriate glassware and any vacuum pump.

The Aura filter/degasser is particularly suitable for use with solid phase extraction disks (SPED). It ensures simple disc placement, large filtration area, small restriction to flow from the disk support element, and the convenience and advantages of the liquid inlet tube (allows sediments to be transferred last).

#### Inverted Solvent System

- No need to tilt bottle to use the last few milliliters
- Replaceable 2µm frit for in-line filtration
- Vented – maintains reservoir contents at atmospheric pressure
- Built-in sparging frit
- Only solvent-resistant materials (glass, Teflon, KEL-F, stainless steel) contact the mobile phase
- Teflon tubing and low pressure, finger-tight fittings included

DESCRIPTION	CAT. NO.	PRICE
INVERTED MOBILE PHASE RESERVOIR SYSTEM		
with 1-Liter Reservoir	59321	
with 2-Liter Reservoir	59322	
REPLACEMENT PARTS		
Reservoir, 1-Liter	59324	
Reservoir, 2-Liter	59323	

DESCRIPTION	CAT. NO.	PRICE
AURA FILTER/DEGASSER UNIT		
with 1-Liter Reservoir	58094	
with 2-Liter Reservoir	58093	
with No Reservoir	55023	

Order: 1.800.325.3010 Technical Service: 1.800.359.3041 Web: www.sigma-aldrich.com/supelco

## HPLC Accessories

## Mobile Phase Degassing / Filtration, Flow Measurement

ULTRA-WARE Mobile  
Phase Reservoir System

This five-valve mobile phase reservoir system offers completely integrated filtration, sparging, storage, and delivery of HPLC mobile phases. Valves controlling helium sparge, venting, vacuum (for filtration or degassing), mobile phase recirculation, and mobile phase delivery to the pump inlet are conveniently located on the front of the cap. Tubing connects to the back of the cap, minimizing clutter.

The solvent pickup adapter allows you to use standard 47mm filter membranes. If you use a solvent recycler, you can close off the reservoir to maintain the helium-sparged environment.

A sparge port check valve prevents mobile phase from backing up into the sparging gas lines, and a built-in pressure relief valve prevents accidental over-pressurization. The screw-cap design allows you to remove the cap without kinking the tubing.

DESCRIPTION	CAT. NO.	PRICE
<b>ULTRA-WARE FIVE-VALVE MOBILE PHASE RESERVOIR SYSTEM</b>		
1-Liter	55024	
2-Liter	55025	
5-Liter	55026	
<b>REPLACEMENT PARTS/ACCESSORIES FOR FIVE-VALVE SYSTEM</b>		
1-Liter Reservoir	55027	
2-Liter Reservoir	55028	
5-Liter Reservoir	55029	
Storage Cap with PTFE Liner	55030	
Lower Screw Cap, GL45	55040-U	
Lower Cap Retainer Ring	55039	
O-ring, TFE/Propylene, size 008 (pk. of 2)	55034	
O-ring, size 122 (pk. of 10)	55041	
Upper Screw Clamp	55032	
Valve Stem, Short, CTFE (sparge or pump)	55035	
Valve Stem, Long, CTFE (filter, vent, or recycle valve)	55036	
Drip Tip, PTFE	55037	
Check Valve with Retainer	55038	
Fittings Kit (included with complete system)	55059	

## Membranes - Fit all 47mm filtration units

DESCRIPTION	CAT. NO.	PRICE
<b>TEFLON MEMBRANES(PK. OF 10)</b>		
47mm, 1.0µm pores	58097	
47mm, 1.5µm pores	58086	
<b>NYLON 66 MEMBRANES (PK. OF 50)</b>		
47mm, 0.45µm pores	58067	
47mm, 0.20µm pores	58060-U	
<b>CELLULOSIC MEMBRANES (PK. OF 100)</b>		
47mm, 0.22µm pores	58188	

NOTE: Do not use ULTRA-WARE system with tetrahydrofuran, chlorinated hydrocarbons, ethers, or ketones. Please inquire about units resistant to these solvents.



## Humonic Model 1000 Liquid Flowmeter

- Easy set-up and operation
- NIST traceable

MODEL	FLOW RANGE (mL/min)	RESOLUTION	CALIBRATION POINTS
1000	0.100 - 1.999	0.001	1.5, 3, 5 mL/min
	2.00 - 9.99	0.01	
	10.0 - 30.0	0.1	

Humonic's Digital Liquid Flowmeters are accurate, convenient, NIST-traceable flow measuring devices for validating HPLC pumping systems. Simply connect the detector outlet tubing to the flowmeter, route the waste lines to appropriate containers, and you are ready to measure flow rates.

This flowmeter uses digital electronics and infrared optics to make accurate, true volumetric measurements by measuring a rising volume of liquid within a precision-bore glass tube. Each unit is factory calibrated against an NIST-registered burette. The calibration parameters are stored on an internal circuit which cannot be modified by the user.

CE approved.

DESCRIPTION	CAT. NO.	PRICE
110VAC	55090-U	
220VAC	55093	

## HPLC Accessories

### Inlet Filters, Debubbler

#### 10µm Slip-On Inlet Filter

Universal design.

We recommend this filter for solvent inlet applications. The 10µm filter protects the HPLC system from contamination while minimizing pump cavitation problems. Compatible with the 1.5mm ID tubing used with many HPLC pumps. Also fits the 2.2mm ID tubing used with Varian pumps and the 3.0mm ID tubing used with Waters pumps. 316 stainless steel tip and filter element connected by a KEL-F collar.



DESCRIPTION	CAT. NO.	PRICE
10µm Slip-On Inlet Filter	59277	

#### 2µm Stainless Steel Inlet Filter

All stainless steel construction with a 2µm porous filter element, 11/16"/1.7cm diameter. 1/8" pipe.



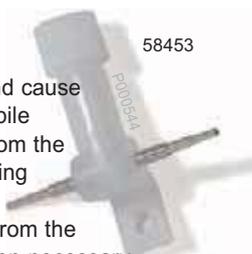
DESCRIPTION	CAT. NO.	PRICE
2µm Stainless Steel Inlet Filter	58267	
1/8" x 1/16" union and fittings	22999	
1/8" x 1/8" union and fittings	22041	

Optional Teflon ferrules:

1/8" front (10 pack)	22058	
1/8" back (10 pack)	22059	
1/16" front (5 pack)	22068	
1/16" back (5 pack)	22069	

#### Mobile Phase Debubbler

Universal design. Gas bubbles in the mobile phase reduce pump output and cause check valves to malfunction. The mobile phase debubbler removes bubbles from the pump inlet line. Bubbles in the incoming mobile phase rise in the debubbler, displacing an equal volume of liquid from the debubbler reservoir to the pump. When necessary, simply remove the cap and refill the reservoir – the gas-liquid interface is visible through the housing. Compatible with 1.5mm ID and 3.0mm ID Teflon tubing used with Waters and other popular HPLC pumps. KEL-F, Teflon, and 316 stainless steel construction.



DESCRIPTION	CAT. NO.	PRICE
Mobile Phase Debubbler	58453	



#### Biocompatible Inlet Filters

Bottom-of-the-Bottle 2µm Filters- These Upchurch filters have an integrated 2µm PEEK sparging frit. Connect to 1/8" tubing through push-on connectors.

Integrated 2µm/10µm Filter/Spargers The unique design of these PEEK and Teflon filter/spargers allows you to use all but the last few milliliters of mobile phase. Two sparging filters in each unit ensure efficient helium sparging. The slip-on design accepts all common 1/8" OD tubing (1.5mm, 2.2mm, and 3.0mm ID).

10µm Inlet Filter - This metal-free Upchurch unit consists of a replaceable 10µm ultra-high molecular weight polyethylene filter that screws into a Tefzel holder. The unit connects to the inlet tubing through a flangeless Tefzel fitting (included).

DESCRIPTION	CAT. NO.	PRICE
<b>BOTTOM-OF-THE-BOTTLE 2µm FILTERS</b>		
28mm Filter Diameter, for GL-45	55058	
23mm Filter Diameter, for GL-38	A437	
<b>INTEGRATED FILTER/SPARGER</b>		
2µm	55021	
10µm	55022	
<b>10µm INLET FILTER</b>		
Complete Assembly	56705	
Replacement Filters (pk. of 5)	56706	

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