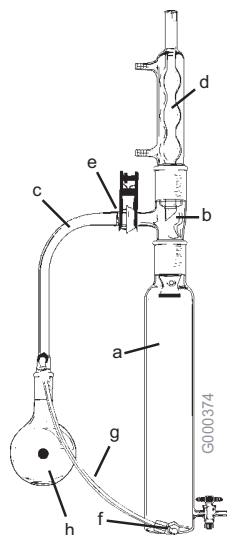


Extraction Glassware

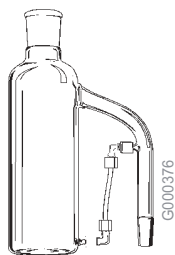
Liquid/Liquid Extraction

US EPA methods specify solvent extraction procedures for semivolatile, pesticide, PCB, and dioxin contaminants in water and solid waste samples. Although analysts encounter a wide range of sample matrices and compounds of interest, the various solvent extraction and concentration techniques depend on the same basic principles. Choice of glassware depends on many factors: sample matrix, characteristics, economy, ease of assembly and cleaning, and compatibility with other glassware. Our selection of glassware includes products for a number of extraction techniques as well as accessories for sample cleanup and solvent recovery. We offer a range of modular designs for ease of cleaning, and a choice of connector types.



Modular Liquid/Liquid Extractor

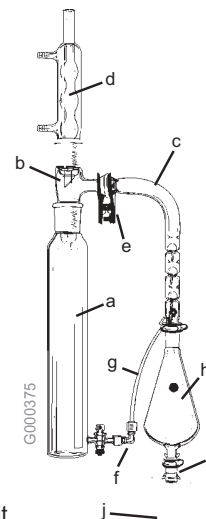
DESCRIPTION	CAT. NO.	PRICE
Modular Liquid/Liquid Extractor Kit	64769	
REPLACEMENT COMPONENTS		
Extraction chamber (a)	64770-U	
Fritted drip spout union (b)	64771	
Side arm elbow (c)	64772-U	
Condenser, 250mL, 345/50 (d)	64739	
Elbow union, Teflon, 1/4" x 1/4" (f)	64775-U	
Tubing, Teflon, 1/4" x 13"/33cm (pk. of 2) (g)	64776	
Round bottom flask, 500mL, 24/40 (h)	64678-U	
Teflon sleeves, 24/40 (pk. of 5)	64761	
Plastic clips, 24/40 (pk. of 5)	64764	
Teflon stopcock plug	64779-U	



Liquid/Liquid Extractor

Order support base, flask, and condenser separately.

DESCRIPTION	CAT. NO.	PRICE
Condenser, 250mL, 345/50	64739	
Round bottom flask, 500mL, 24/40	64678-U	
Teflon sleeves, 24/40 (pk. of 5)	64761	
Teflon sleeves, 345/50 (pk. of 2)	64789	
Plastic clips, 24/40 (pk. of 5)	64764	



Supelco Extractor-Concentrator Kit

Combine extraction and concentration functions in one device - This apparatus provides efficient, continuous extraction of organic compounds from a 1-liter water sample into a heavier-than-water solvent, such as methylene chloride. The extracted sample then can be concentrated for analysis.

- Eliminates the need to transfer extracted sample for concentration
- Saves set-up and clean-up time
- Allows recovery of extraction solvent for proper disposal
- Specially designed heating block included (requires heat source)

DESCRIPTION	CAT. NO.	PRICE
Liquid/Liquid Extractor-Concentrator Kit	64807-U	
REPLACEMENT COMPONENTS AND ACCESSORIES		
Extraction chamber (a)	64808	
Drip spout union (b)	64809-U	
Side arm elbow with Snyder column (c)	64810-U	
Condenser, 250mL, 345/50 (d)	64739	
Elbow union, Teflon, 1/4" x 1/4" (f)	64775-U	
Tubing, Teflon, 1/4" x 13"/33cm (pk. of 2) (g)	64776	
Kuderna-Danish flask, 500mL (h)	64710-U	
Receiving vessel, 10mL (i)	64695	
Heating block (j)	64811-U	
Plastic clips, 24/40 (pk. of 5)	64764	
Plastic clips, 19/22 (pk. of 5)	64763	

Extraction Glassware

Separatory Funnel, Soxhlet Extraction



Separatory Funnel

Squibb-type, with glass or Teflon stopcock plug.

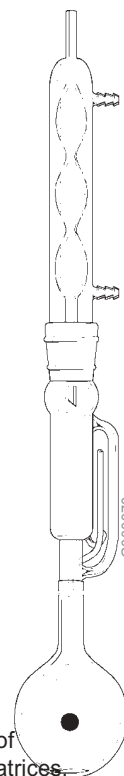
CAPACITY	STOPCOCK SIZE	STOPPER SIZE	CAT. NO.	PRICE
WITH GLASS STOPCOCK PLUG				
250mL	4	22	64803-U	
2000mL	6	38	64804-U	
WITH TEFLON STOPCOCK PLUG				
250mL	4	22	64805-U	
2000mL	6	38	64806	



Thimbles

High-purity cellulose, approximately 1.5mm wall thickness, or high-quality borosilicate glass, 40-60µm porous disk.

DESCRIPTION	QTY.	CAT. NO.	PRICE
CELLULOSE THIMBLES			
25 x 80mm	25	64840-U	
33 x 94mm	25	64841-U	
43 x 123mm	25	64842	
GLASS THIMBLES			
25 x 85mm	1	64836-U	
35 x 90mm	1	64837	
45 x 130mm	1	64838	



Soxhlet Extraction Apparatus

For continuous solvent extraction of semivolatiles from solid matrices.

Use this inert all-glass system for extracting semivolatiles from a solid or semi-solid sample matrix – soil, for example – into an organic extraction solvent, such as hexane, acetone, or methylene chloride. The Soxhlet apparatus is simple to set up and use, and it features ground glass joints for easy dismantling and cleaning.

Soxhlet Apparatus Kits

Order glass or cellulose thimbles separately.

DESCRIPTION	SMALL	MEDIUM	LARGE
Extractor Capacity	50mL	85mL	200mL
Flask Capacity	125mL	250mL	300mL
Extractor Top Joint	34/45	45/50	55/50
Extractor Bottom Joint	24/40	24/40	24/40
Extractor ID	30mm	38mm	50mm
	CAT. NO.	64824	64825
	PRICE	64826	64826

Soxhlet Apparatus Replacement Components

DESCRIPTION	CAT. NO.	PRICE
CONDENSER		
Small	64815-U	
Medium	64816-U	
Large	64817-U	
EXTRACTOR		
Small	64818	
Medium	64819-U	
Large	64820-U	
FLASK		
Small	64821-U	
Medium	64822-U	
Large	64823	

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

Sample
Preparation

SUPELCO

Extraction Glassware

Sample Concentration Apparatus

Macro

	GROUND JOINTS		THREADS	
	CAT. NO.	PRICE	CAT. NO.	PRICE
Kit*	64685-U		64704-U	
SNYDER COLUMN				
2-ball	64727-U		—	—
3-ball	64693-U ¹		64705-U ²	
FLASK				
250mL	64729		64708-U	
500mL	64710-U ¹		64706-U ²	
RECEIVING VESSEL				
4mL	64687-U		64702	
10mL	64695		64703	
15mL	64684-U ¹		64707 ²	
25mL	64731-U		64726	
GLASS STOPPERS ∇9/22				
Solid	64644		—	—
SPRINGS, 13mm (PK. OF 20)				
	64711		—	—
TEFLON SLEEVES (PK. OF 5)				
∇ 19/22	64762		—	—
∇ 24/40	64761		—	—
PLASTIC CLIPS (PK. OF 5)				
∇ 19/22	64763		—	—
∇ 24/40	64764		—	—
MICRO CONNECTORS (PK. OF 6)				
∇ 20/20	—		64700-U ²	
∇ 13/13	—		64699-U	
∇ 13/20	—		64701-U	

Micro

	GROUND JOINTS		THREADS	
	CAT. NO.	PRICE	CAT. NO.	PRICE
Kit*	64718		64688-U	
SNYDER COLUMN				
0-ball	64721 ³		—	—
2-ball	64694		—	—
3-ball	64720-U		64696	
FLASK				
40mL	64722 ³		64698 ⁴	
250mL	64719-U		64708-U	
RECEIVING VESSEL				
2mL	64723 ³		64689-U ⁴	
4mL	64687-U		64702	
10mL	64695		64703	
SPRINGS, 13mm (PK. OF 20)				
	64711		—	—
TEFLON SLEEVES (PK. OF 5)				
∇ 19/22	64762		—	—
PLASTIC CLIPS (PK. OF 5)				
∇ 19/22	64763		—	—
MICRO CONNECTORS (PK. OF 6)				
∇ 20/20	—		64700-U ⁴	
∇ 13/13	—		64699-U ⁴	
∇ 13/20	—		64701-U	

* Components of kits 64685-U, 64704-U, 64718, and 64688-U are indicated with ^{1 2 3 4} respectively.

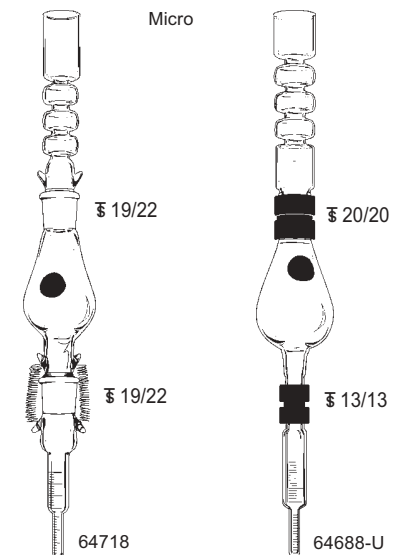
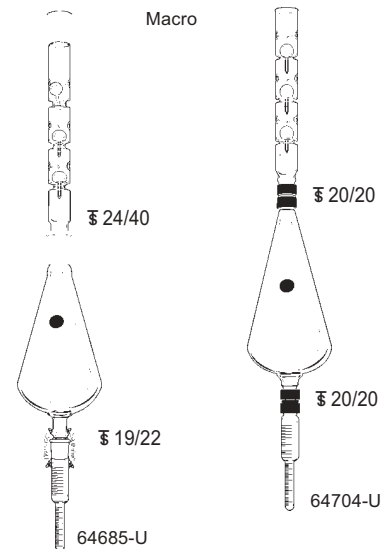
Kuderna-Danish Sample Concentrators

Widely used in semivolatile and pesticide analysis

For US EPA protocol

Developed for concentrating compounds dissolved in volatile solvents

Made in our own glass shop

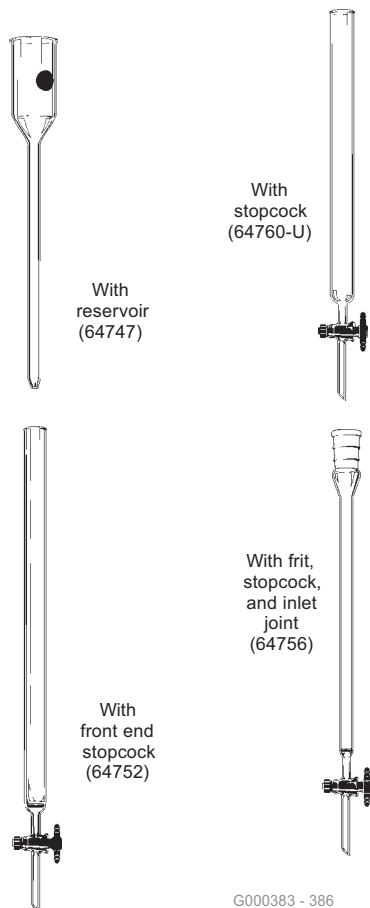


G000379 - 382

Extraction Glassware Sample Cleanup Apparatus

Liquid Chromatography Columns

Described in US EPA Protocol- Fill these columns with appropriate adsorbents when cleaning or drying environmental samples for pesticide or priority pollutant analyses.



G000383 - 386



P000113

Drying Column with Reservoir

We designed this column (Cat. No. 64785-U) to meet US EPA specifications for drying solvent extracts in procedures for semivolatle organic compounds. The reservoir will hold approximately 60mL of extract – the entire product from one separatory funnel extraction. Holds a 19mm x 10cm bed of sodium sulfate.



P000114

Reusable Sample Cleanup Columns

Each of these glass “champagne” columns consists of a reservoir and a stem ending in a ground tip. The reservoir of the large columns (Cat. No. 58099, 160mm long, 36mm ID, 6mm stem ID) is approximately 30mL; minicolumns (Cat. No. 58098, 81mm long, 17.5mm ID, 3.5mm stem ID) have a 4mL reservoir.

DESCRIPTION	CAT. NO.	PRICE
COLUMN WITH RESERVOIR		
200mm x 7mm ID x 9mm OD column, 280mm overall	64748	
200mm x 9mm ID x 11mm OD column, 280mm overall	64747	
COLUMN WITH TEFLON STOPCOCK		
300mm x 22mm ID x 25mm OD column, 415mm overall	64760-U	
COLUMN WITH COARSE FRIT AND TEFLON STOPCOCK		
300mm x 10.5mm ID x 13mm OD column, 415mm overall	64752	
400mm x 19mm ID x 22mm OD column, 515mm overall	64753-U	
300mm x 22mm ID x 25mm OD column, 415mm overall	64754	
400mm x 22mm ID x 25mm OD column, 515mm overall	64755	
COLUMN WITH COARSE FRIT, TEFLON STOPCOCK AND INLET JOINT		
300mm x 10.5mm ID x 13mm OD column, 415mm overall	64756	
400mm x 19mm ID x 22mm OD column, 515mm overall	64757	
300mm x 22mm ID x 25mm OD column, 415mm overall	64758-U	
400mm x 22mm ID x 25mm OD column, 515mm overall	64759-U	
Replacement Stopcock Plug, Teflon	64779-U	
DRYING/CLEANUP COLUMNS		
Drying column with reservoir	64785-U	
Champagne cleanup columns (pk. of 6)	58099	
Miniature champagne cleanup columns (pk. of 10)	58098	

HELPFUL HINTS

For materials to use in these columns, see Adsorbents in the index.

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Sample Preparation

Extraction Glassware

Sample Concentration/Extraction Accessories

64811-U



Economical Heating Block
Order hot plate separately.

DESCRIPTION	CAT. NO.	PRICE
Heating block	64811-U	

64715



64716-U



Liquid/Liquid Extraction Flasks

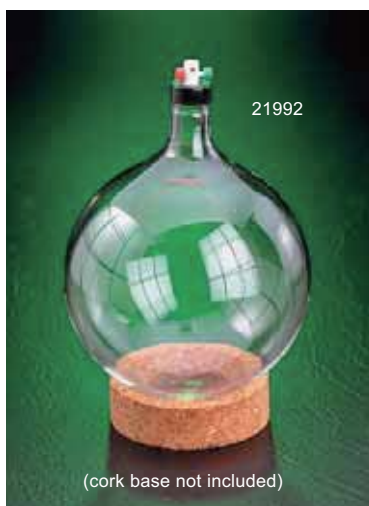
Heat resistant borosilicate glass flasks, excellent for extracting trihalomethanes from drinking water. Also useful for collecting samples, preparing solutions, derivatization reactions, extractions, and many other applications.

DESCRIPTION	QTY.	CAT. NO.	PRICE
THM flask, cap & septum, 10mL	12	64715	
THM flask, cap & septum, 25mL	12	64716-U	
Hole cap only	100	27176	
Teflon-faced silicone rubber septa	100	27177	
Mininert sampling valve, 20mm	12	33303	

Uni-PIN Glass Marking Pen

Writes on virtually any surface, even glass, without fading or smearing. The 0.33mm fineline marker uses a permanent oil-based black ink that is waterproof, and fade and bleed resistant.

DESCRIPTION	CAT. NO.	PRICE
Uni-PIN glass marking pen	64800-U	



P000112

(cork base not included)

Static Dilution Bottle

Use this bottle to prepare gaseous volatile organic standards, using a technique developed by the US EPA for air analyses. Simply inject neat compound through the valve and allow it to vaporize, then withdraw aliquots, using a gas-tight syringe. Multicomponent standards are conveniently prepared and typically can be stored for at least one week.

Two-liter, round-bottom flask with threaded neck. Accommodates a Mininert valve.

DESCRIPTION	CAT. NO.	PRICE
Static dilution bottle	21992	
Replacement 24mm Mininert valve	33304	
Replacement Mininert septa, pk. of 50	33310-U	
Septum Inserter	33311	

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