

UltraFlow™ Filters for Oil and Grease

UltraFlow Extraction Disks with Prefilter Layer improve filtration in EPA Method 1664A.

UltraFlow SPE filter disks from Environmental Express provide the best recoveries, fastest flow rates and highest solids filtering capacity available for EPA 1664A testing.

Unlike other HEM extraction filters, UltraFlow filters have two layers. The bottom layer is made of fine glass fibers infused with C-18 adsorbent which attracts and holds the non-polar HEM fractions. The top layer consists of coarse glass fibers. This pre-filtering layer improves filtration by allowing faster extractions and has a higher loading capacity which allows complete filtration for a wide variety of samples. The purchase of a separate prefilter is not necessary and in many cases 47mm filters can be substituted for samples that have traditionally required 90mm filters.

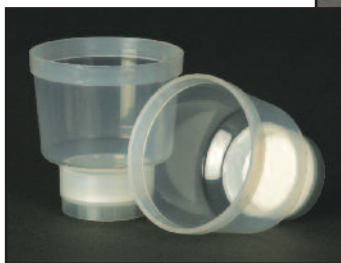
UltraFlow Filter Disks are available in 47mm, 90mm and 100mm.

Disposable Funnels with 47mm filter disks are available to fit the Environmental Express StepSaver™ and the J.T. Baker® Speedisk Manifold.

To make analysis easier, 47mm diameter UltraFlow filter disks are also available housed in polypropylene, disposable funnels with over 250mL capacity (shown right). These lightweight plastic funnel assemblies reduce cleanup and improve safety. In addition, oil and grease fractions do not readily adhere to the sides of the funnels, making recoveries easier. Tests show no measurable extractable levels from the funnels themselves.

UltraFlow LH Extraction Disks are also available.

For applications that do not require pre-filtering, Environmental Express also offers the UltraFlow LH (Low Hexane) solid phase extraction filters. These filters have the same extraction capacity as standard UltraFlow filters, without the extra prefilter layer. Even



This photo shows three Environmental Express StepSaver units with polypropylene filter funnel assemblies that house UltraFlow filter disks.

without the prefilter, the LH filters are significantly faster than competing SPE filters for oil and grease. These filters are suitable for all samples except those with significant amounts of silts, clays or colloids. The UltraFlow LH requires less n-hexane for complete elution of the trapped HEM making filtration more economical and resulting in faster evaporations.

Please contact our Technical Sales Department for more information on our StepSaver Systems and UltraFlow products.

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Call 800.745.8218 or 843.576.1147 ■ www.environmentalexpress.com



UltraFlow™ Filters for Oil and Grease

UltraFlow Products

Description	Catalog #
UltraFlow StepSaver™ Kit UltraFlow 47mm StepSaver unit with polypropylene filter funnel assemblies- (Each StepSaver kit includes glass extraction head, stopcock, clamp, 100mL flask and one pack of G5127 UltraFlow Filter Funnel Assemblies)	G5747
UltraFlow Filters with Prefilter Layer 47mm UltraFlow (disks only), Pack of 20 Nylon Mesh 47mm Filter Screens, Pack of 50 90mm UltraFlow (disks only), Pack of 15 100mm UltraFlow Filters for Horizon® SPE-DEX® (disks only), Pack of 15	G5047MM G5047N G5090MM G5100MM
Filter Funnel Assemblies with UltraFlow Disks with Prefilter Layer UltraFlow Filter Funnel Assembly, funnel size 250mL, filter size 47mm, Pack of 20 UltraFlow Filter Funnel Assembly for J.T. Baker® manifold, funnel size 250mL, filter size 47mm, Pack of 20 UltraFlow Filter Funnel Base only with filter and screen for J.T. Baker manifold, Pack of 20	G5127 G5247 G5250
UltraFlow LH Filter Disks Without Prefilter Layer 47mm UltraFlow LH (disks only), Pack of 20 90mm UltraFlow LH (disks only), Pack of 15 100mm UltraFlow LH (disks only), Pack of 15	G5347MM G5390MM G5300MM

Environmental Express UltraFlow Comparisons

The chart (right) is the result of an independent laboratory study comparing UltraFlow disks to competitors' products.

Environmental Express UltraFlow vs. J.T. Baker® Speedisk® and 3M® Empore®

The Environmental Express UltraFlow Oil & Grease solid phase extraction disks are two-stage laminated glass fiber filters that provide the best recoveries, fastest flow rates and highest solids filtering capacity available.

Environmental Express UltraFlow vs. 3M Empore

The filtering capacity test consisted of two parts. One sample set was 1000mg of flour mixed into one liter of deionized water. This blank matrix tested filtering capacity with a high suspended solids load. A second sample set consisted of a 40mg hexadecane/stearic acid standard mixed with 1000mg of flour in one liter of deionized water. The results demonstrate excellent recovery, even with particulate-laden samples.

UltraFlow vs. J.T. Baker Speedisk and 3M Empore SPE Disk Brand/Standard Concentration	Filtration Time (min.sec)	Results (mg/L)	% Recovery
UltraFlow – Hexadecane/Stearic Acid Std (40mg/L)	3.31	37.3	93.2%
UltraFlow – Hexadecane/Stearic Acid Std (40mg/L)	1.04	37.9	95.0%
Speedisk – Hexadecane/Stearic Acid Std (40mg/L)	6.29	33.8	84.5%
Speedisk – Hexadecane/Stearic Acid Std (40mg/L)	6.46	33.4	83.5%
3M Empore Disk – Hexadecane/Stearic Acid Std (40mg/L)	2.07	38.5	96.0%
3M Empore Disk – Hexadecane/Stearic Acid Std (40mg/L)	2.07	27.2	68.0%
UltraFlow vs. J.T. Baker Speedisk Various Standard Matrices	Filtration Time (min.sec)	Results (mg/L)	% Recovery
UltraFlow – Motor Oil Std (200mg/L)	4.49	153	76.5%
Speedisk – Motor Oil Std (200mg/L)	6.43	116	58.0%
UltraFlow – Corn Oil Std (800mg/L)	5.32	778	97.2%
Speedisk – Corn Oil Std (800mg/L)	9.16	761	95.1%
UltraFlow vs. 3M Empore SPE Disk Brand Various Blank and Sample Matrices	Filtration Time (min.sec)	Results (mg/L)	% Recovery
UltraFlow Disk – 1000mg flour blank	0.7 seconds	NA	NA
UltraFlow Disk – 1000mg flour + 40mg Std	72 seconds	41.1	103%
3M Empore Disk – 1000mg of flour blank	863 seconds	NA	NA
3M Empore Disk – 1000mg flour + 40mg Std	Clogged	Clogged	Clogged



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