

Sample Preparation

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Solid Phase Extraction Cartridges from Restek

Proven Quality, Superior Cleanliness, and Method-Specific Performance

Resprep® solid phase extraction (SPE) cartridges are manufactured with specially cleaned sorbents and high-purity materials to minimize background and to help eliminate troublesome interference. In order to ensure reproducibility, raw materials and finished products go through rigorous QC testing, targeted to specific applications whenever possible, and an extensive certificate of analysis details the results.

Available with the following sorbents:

- **Silica:** Multipurpose
- **EPH Silica:** Petroleum
- **Florisil® Adsorbent:** Pesticides
- **CarboPrep® Adsorbent:** Dirty Samples
- **Reversed Phase:** Hydrophobic Compounds



www.restek.com/resprep

Resprep® SPE Cartridges (Normal Phase)

Hydrophilic (polar) adsorbents used to extract hydrophilic analytes from nonpolar matrices, such as organic solvents (e.g., polar contaminants from sample extracts).

	3 mL/500 mg (50-pk.)	6 mL/500 mg (30-pk.)	6 mL/1,000 mg (30-pk.)	15 mL/2 g (15-pk.)
Florisol (EPA SW 846 methods and CLP protocols)	24031		24034	26228
	24032*	26086**	26085**	
Silica (EPA SW 846 methods)	24035		24038	
	24036*			

*PTFE frits

**Glass tubes with PTFE frits



24031

All cartridges are manufactured using high-density polypropylene and have polyethylene frits unless otherwise noted.

Cartridges may be processed by any one or all of these techniques: positive pressure, sidearm flask, centrifuge, or vacuum manifold.

Resprep® SPE Cartridges (Bonded Reversed Phases)

Hydrophobic (nonpolar) silica-based adsorbents; used to extract hydrophobic analytes from polar matrices, such as water (e.g., pesticides from water).

	1 mL/100 mg (100-pk)	3 mL/200 mg (50-pk.)	3 mL/500 mg (50-pk.)	6 mL/500 mg (30-pk.)	6 mL/1,000 mg (30-pk.)	60 mL/10 g (16-pk.)
C18 (high load, endcapped)	26030	26031	24050	24052	24051	26035



26030

Closed End SPE Cartridge: Activated Sodium Sulfate

- High quality anhydrous sodium sulfate.
- Approximately 2 grams prepackaged in a convenient capped cartridge with both male and female luer ends for easy connection to a variety of devices or equipment.
- The adsorbent is fully activated and ready to use for removal of excess water from organic solvent solutions, prior to many types of analysis.
- Capped cartridges will remain active for long periods of storage in the lab.

SPE Cartridge	Bed Weight	qty.	cat#
Activated Sodium Sulfate	2 g	50-pk.	26207



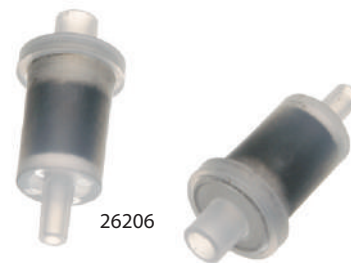
26207

CarboPrep® Reversing SPE Cartridges

- High adsorbent capacity (surface area ~200 m²/g) for large volume sampling.
- Chromatographic grade graphitized carbon provides consistent and quantitative recoveries of a wide variety of semivolatiles, pesticides, and herbicides.
- 500 mg bed weight.

Reversing cartridge design allows convenient inverted elution of strongly retained analytes using minimum solvent volumes. Ideal design for extraction of pesticides in water.¹

SPE Cartridge	Bed Weight	qty.	cat#
CarboPrep 200 Reversing Cartridge	500 mg	30-pk.	26206



26206

¹Crescenzi, C.; DiCorcia, A.; Guerriero, E.; and Saperi, R. "Development of a Multiresidue Method for Analyzing Pesticide Traces in Water Based on Solid-Phase Extraction and Electrospray Liquid Chromatography Mass Spectrometry", Environmental Science & Technology vol.31, no. 2 (1997) 479-488. (Reference not available from Restek.)

SPE Cartridges



26091

**Excellent for Pesticide
Residue Cleanup!**

Resprep® CarboPrep® SPE Cartridges

- Improved recovery of sulfonylurea herbicides, phenols, carbamates, and triazine herbicides, compared to C18 and C8 cartridges.
- Wide range of selectivity for both analytes and their metabolites or degradation products.
- Rapid sampling flow rates; uncompromised recoveries.
- Maximum capacity for contaminant cleanup.
- Controlled manufacturing improves cleanliness and ensures reproducible performance.
- Excellent performance removing pigments from samples.

CarboPrep® cartridges are manufactured from chromatographic-grade, nonporous, graphitized carbon. Our manufacturing process minimizes variability and improves recovery and cleanup procedures. We offer two types of carbons: CarboPrep® 90 has a surface area of approximately 90 m²/g, and CarboPrep® 200 has a surface area of 200 m²/g. Both have higher capacity than silica-based packings for a variety of compounds.

CarboPrep® cartridges can be used for sample extraction of organic compounds and extract cleanup to remove matrix interferences, including highly pigmented materials.

SPE Cartridge	Tube Volume, Bed Weight	qty.	cat.#
CarboPrep 90	3 mL, 250 mg	50-pk.	26091
CarboPrep 90	6 mL, 500 mg	30-pk.	26092
CarboPrep 200	3 mL, 250 mg	50-pk.	26088
CarboPrep 200	6 mL, 500 mg	30-pk.	26087

Pesticide Residue Cleanup SPE Cartridges

- Convenient, multiple adsorbent beds in a single cartridge.
- For use in multiresidue pesticide analysis to remove matrix interferences.
- Excellent for cleanup of dietary supplement extracts.



26194



26128

SPE Cartridge	qty.	cat.#
6 mL Combo SPE Cartridge Packed with 500 mg CarboPrep 90/500 mg Aminopropyl, Polyethylene Frits	30-pk.	26193
6 mL Combo SPE Cartridge Packed with 500 mg CarboPrep 90/500 mg PSA, Polyethylene Frits	30-pk.	26194
6 mL SPE Cartridge Packed with 500 mg PSA, Polyethylene Frits	30-pk.	26195
6 mL Combo SPE Cartridge Packed with 200 mg CarboPrep 200 and 400 mg PSA, PTFE Frits	30-pk.	26127
6 mL Combo SPE Cartridge Packed with 250 mg CarboPrep 200 and 500 mg PSA, PTFE Frits	30-pk.	26128
6 mL Combo SPE Cartridge Packed with 500 mg CarboPrep 200 and 500 mg PSA, PTFE Frits	30-pk.	26129

PSA—primary and secondary amine

Method Specific SPE Cartridges

These cartridges have been specifically designed to provide consistent and reproducible results for the method or application stated.

Description	Applications	Tube Volume, Bed Weight	qty.	cat.#
EPH Fractionation	Separation of aliphatic and aromatic hydrocarbons into distinct extract fractions. Specially treated to reduce contaminants and increase capacity. Silica packing.	20 mL, 5 g	15-pk.	26065
EPA Methods 521 & 522	For use in EPA Method 521: Nitrosamines in Drinking Water and EPA Method 522 for 1,4-Dioxane in Drinking Water. Activated charcoal packing.	6 mL, 2 g	30-pk.	26032
EPA Method 548.1	Extraction of endothall from aqueous samples. Weak anion exchange resin (BioRex 5) packing.	6 mL	30-pk.	26063
Ultra Quat SPE	For use in HPLC analysis of paraquat/diquat, as an alternative to EPA 549.2. For an HPLC column developed specifically for this application, see page 183.	6 mL, 500 mg	30-pk.	25499
Organo Tin	High-capacity cleanup of butyl and phenyl tin compounds from soil, water, and biota. Mixed bed.	60 mL	16-pk.	24049
RDX	Extraction of explosive compounds (similar to EPA Method 8095 and 8330 list) from water samples.	6 mL, 500 mg	30-pk.	26093

Resprep® SPE Tube Parts & Accessories

Empty Tubes (polypropylene)	Volume	qty.	cat.#
	1 mL	50-pk.	26010
	3 mL	50-pk.	26011
	6 mL	50-pk.	26012
	15 mL	50-pk.	26013
	sample reservoir, 25 mL	12-pk.	26014
	sample reservoir, 60 mL	12-pk.	26015
Frits (polyethylene), 20 µm	Fits Tube Volume, Diameter	qty.	cat.#
	1 mL, 6 mm	100-pk.	26016
	3 mL, 9 mm	100-pk.	26017
	6 mL, 1.2 cm	100-pk.	26018
	15 mL, 1.6 cm	100-pk.	26019
	25 mL, 2.0 cm*	100-pk.	26020
	60 mL, 2.6 cm	100-pk.	26021
Tube Caps (polyethylene)	Fits Tube Volume	qty.	cat.#
	1 mL	12-pk.	26001
	3 mL	12-pk.	26002
	6 mL	12-pk.	26003
	15 mL	12-pk.	26004
	25 mL*	12-pk.	26005
Female Luer End Caps (polypropylene)	Fits Tube Volume	qty.	cat.#
	universal	12-pk.	26000
Connectors (polypropylene)	Fits Tube Volume	qty.	cat.#
	1, 3, 6 mL	12-pk.	26007
	15, 25 mL*	12-pk.	26008
	60 mL	12-pk.	26009

*For 20 mL packed tubes.

Resprep® tubes, frits, caps, and connectors for your method development needs.



26012



26018



26000

26003



26007

Solid Phase Extraction Cartridges

 from Restek
 Proven Quality • Superior Cleanliness • Method-Specific Performance

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Manifolds & Replacement Parts

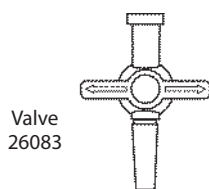
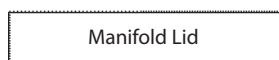


26077

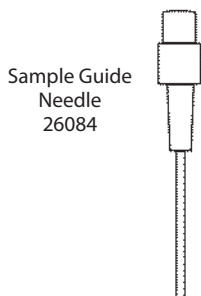
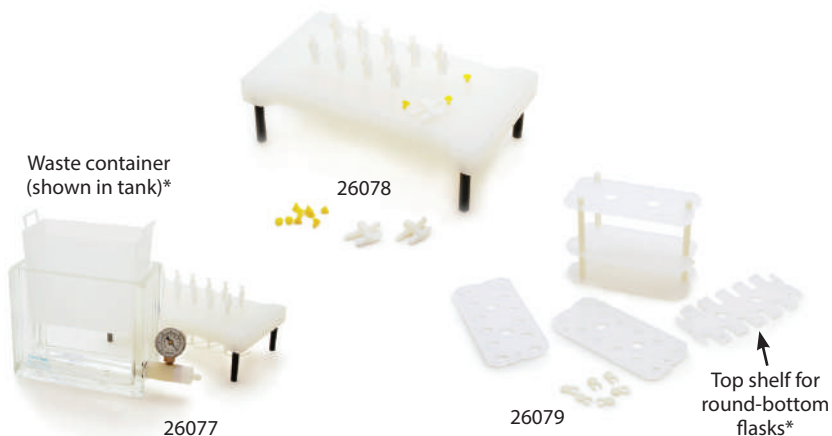
Resprep® 12- or 24-Port SPE Manifolds

- Use with any standard male luer end SPE cartridges.
- Inert, PTFE sample guides reduce cross-contamination and carryover.
- Flexible sample collection rack will accommodate a variety of receiving vessels.
- Quick vacuum-release valve for better system control.
- Individual valves allow vacuum control for each cartridge, improving reproducibility.

Resprep® Manifold Replacement Parts

Valve
26083Valve
Attachment
26130

Manifold Lid

Needle
Attachment
26131Sample Guide
Needle
26084Waste container
(shown in tank)*

26078

26077

26079

Top shelf for
round-bottom
flasks*

Description

Description	qty.	cat.#
Complete Resprep SPE Manifold, 12-Port (Includes: glass basin with built-in vacuum regulator, polypropylene lid with 12 individual control valves, 12-position collection rack, 12 PTFE sample guides, and waste container.)	kit	26077

Complete Resprep SPE Manifold, 24-Port (Includes: glass basin with built-in vacuum regulator, polypropylene lid with 24 individual control valves, 24-position collection rack, and 24 PTFE sample guides.)	kit	26080
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Resprep® Manifold Replacement Parts

Description

Description	qty.	cat.#
Replacement Waste Container, 12-Port	ea.	24014
Replacement Vacuum Valve and Gauge Assembly	ea.	24008
Glass Vacuum Chamber w/gauge & valve for Resprep manifolds, 6 or 12-Port	ea.	25991

Collection Rack

Collection Rack, 12-Port	ea.	26079
Collection Rack, 24-Port	ea.	26082

Manifold Lid

Replacement Manifold Lid (sample guides not included), 12-Port	ea.	26078
Replacement Manifold Lid (sample guides not included), 24-Port	ea.	26081

Manifold Lid Replacement Parts

Valves, 12 or 24-Port	2-pk.	26083
Valve Attachment	48-pk.	26130
Needle Attachment	48-pk.	26131
Sample Guide Needles, 12 or 24-Port	12-pk.	26084

*Waste container (shown in tank) and top shelf for round-bottom flasks are not included in 24-port manifold kit (cat.# 26080).



CE

24002

Oil-Free Vacuum/Pressure Station for 12-Port Resprep® SPE Systems

Allows switching from pressure to vacuum in a matter of seconds. Quiet, oil-free unit will not contaminate the extraction system or your samples. Provides 20" Hg (68 kPa) vacuum or 18 psi (124 kPa) pressure.

Description

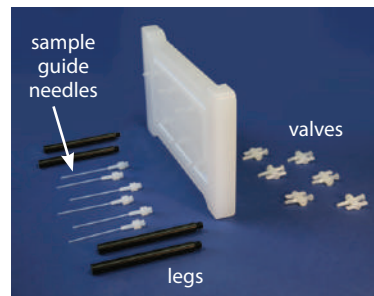
Description	qty.	cat.#
Oil-Free Vacuum/Pressure Station, 115VAC, 60Hz, US	ea.	24002
Oil-Free Vacuum/Pressure Station, 230VAC, 50Hz, Europe (CE certified)	ea.	24003
Vacuum Tubing (10 ft./3 m, 1/4" ID)	ea.	24016

Not recommended for use with 24-port manifold.

Warranty period is one year from date of purchase. Evaluation fee is charged for repairs out of warranty.

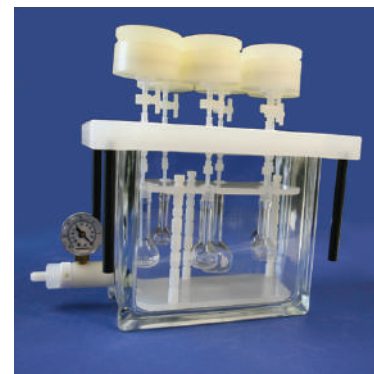
Resprep® 6-Port Disk Manifold Lid

- Low-cost option for disk extraction; fits standard 3 3/4" x 7 1/2" glass vacuum chambers.
- Doubles sample capacity—holds six disks, compared to standard 12-port manifolds, which only hold three.
- Individual vacuum control for each port improves reproducibility.
- Collection plate design secures variety of receiving vessels.
- Inert PTFE sample guides reduce cross-contamination and carryover.
- Compatible with any standard male luer end disk holder.



Description	qty.	cat.#
Resprep 6-Port Disk Manifold Lid*		
Includes: polypropylene lid with 6 ports, 6 nylon valves, 6 PTFE needle guides, 4 black lid legs, collection baseplate, collection plate for volumetric flasks, collection plate for concentrator tubes, 3 white collection plate posts, 12 collection plate retaining clips	kit	25992
Accessories		
Glass Vacuum Chamber w/gauge & valve for Resprep manifolds, 6 or 12-Port	ea.	25991
Manifold Lid Replacement Parts		
Valves, 12 or 24-Port	2-pk.	26083
Valve Attachment	48-pk.	26130
Needle Attachment	48-pk.	26131
Sample Guide Needles, 12 or 24-Port	12-pk.	26084
Gasket, 12-port	2-pk.	24011

*Vacuum chamber (cat.# 25991) not included.



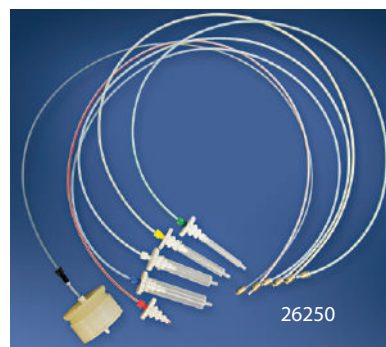
Fully assembled unit shown with glass vacuum chamber (cat.# 25991) and disk holders (cat.# 24020).

Resprep® Sample Delivery System

- Compatible with Resprep® 1, 3, 6, and 15 mL SPE cartridges and Diskcover-47 extraction disk holder (cat.# 24020).
- Six PTFE transfer lines (1/8" OD x 1/16" ID x 36" long); each is banded with a different color for easy sample identification.
- Specified in EPA drinking water methods.
- Tested to pH of 1 to ensure no contaminants leach from system.

Use the Resprep® sample delivery system to transfer large volumes of low viscosity samples directly from a bottle to a solid phase extraction cartridge, or to a disk on a vacuum manifold system for extraction or cleanup. Each unit consists of six transfer lines with a stainless steel weight on one end and a color-coded screw fitting and polyethylene terephthalate (PET) adapter on the opposite end.

Description	qty.	cat.#
Resprep Sample Delivery System	6-pk.	26250



Disks & Holders



Resprep® disks & flow filters extract analytes of interest at high flow rates and significantly reduce clogging.



26024



26023



24020



24029

Resprep®-C18 and Resprep®-C8 SPE Disks

- Glass fiber disks embedded with C18 or C8 bonded silica.
- Extract semivolatile organic compounds.
- Deep-pore design reduces clogging and allows faster flow rates.
- Meet requirements for EPA Methods 525.1, 506, 550.1, and 549.1.
- Lower cost than PTFE disks.

Description	Diameter	qty.	cat.#
Resprep-C8	47 mm	24-pk.	24048
Resprep-C18	47 mm	20-pk.	24004
Resprep-C18	90 mm	12-pk.	25988

Resprep® Oil & Grease SPE Disks

- 47 mm glass fiber disks embedded with specialty bonded silica.
- Meet requirements for EPA Method 1664.*
- Reduce emulsion formation and amount of solvent required by previous EPA methods.
- No chlorofluorocarbons needed.

Description	qty.	cat.#
Resprep Oil & Grease SPE Disks	20-pk.	26022

*A sodium sulfate drying tube (cat.# 26207, page 397) and a 0.45 µm PTFE syringe filter (cat.# 26145, page 408) also may be used.

Resprep® SPE Flow Filters

- Designed specifically to improve flow when filtering oil and grease samples.
- Use with Resprep® Diskcover-47 reservoir, or any 47 mm glass sample reservoir.

Description	qty.	cat.#
Resprep SPE Flow Filters	20-pk.	26024

Resprep® Resin SPE Disks

- 47 mm glass fiber disks embedded with styrene/DVB resin.
- For chlorinated, benzidine-containing, or nitrogen-containing pesticides.
- Meet requirements of EPA Methods 515.2 and 553.

Description	qty.	cat.#
Resprep Resin SPE Disks	20-pk.	26023

Parts for Diskcover-47 Extraction System**Diskcover-47 Extraction Disk Holder**

- Compatible with most vacuum manifold systems that accept 1/8-inch male luer fittings.
- Sample can be automatically introduced via 1/8-inch PTFE tubing or from the optional Diskcover-47 reservoir.

Description	qty.	cat.#
Diskcover-47 Extraction Disk Holder	ea.	24020
Diskcover-47 Extraction Disk Holder	6-pk.	24021
PTFE Tube Luer Adaptors (1/8" OD)	6-pk.	24017
PTFE Sample Tubing (2 ft./0.6 m, 1/8" OD)	6-pk.	24025

Diskcover-47 Reservoir*

The Diskcover-47 open-top reservoir allows you to pour up to 125 mL of sample directly onto the filter disk holder. It easily installs on top of the Diskcover-47 extraction disk holder.

Description	qty.	cat.#
Diskcover-47 Reservoir	ea.	24029
Diskcover-47 Reservoir	6-pk.	24030

*Must be used with the Diskcover-47 extraction disk holder.

Sodium Sulfate (Bulk Adsorbent)

- Ideal for removing water from sample extracts.
- Activate by heating to 400 °C for four hours before use.
- Packaged in recloseable 5 kg buckets.

Anhydrous sodium sulfate is the most common drying agent used to remove moisture from sample extracts. We package our 60 mesh material in recloseable buckets.

Description	qty.	cat.#
Sodium Sulfate	5 kg	26204

**Florisil® PR** (Bulk Adsorbent)

- Pesticide residue grade.
- Packaged in glass containers.

Florisil® PR is commonly used to remove polar interferences from pesticide residues. This bulk material is ideal for labs packing their own extraction cartridges for pesticide residue extractions.

Description	qty.	cat.#
Florisil PR, 60/100 mesh	500 g	26135

**Granulated Activated Copper** (Bulk Adsorbent)

- Convenient form for removing sulfur from environmental extracts.
- Acidified and activated—ready for use.

Activated copper effectively removes elemental sulfur from environmental extracts. Our acid-washed and activated material can be used right out of the package. The 30 mesh granular material eliminates the potential for fine copper particles in filtered extracts.

Description	qty.	cat.#
Granulated Activated Copper, 30 mesh	1 kg	26136

**Ottawa Sand** (Bulk Adsorbent)

- Sample medium for matrix spikes and laboratory control blanks.
- Packaged in convenient 5 kg buckets.

Ottawa sand is listed in several U.S. EPA methods as the specified medium for matrix spike and laboratory control blanks.

Description	qty.	cat.#
Ottawa Sand	5 kg	26137

**Diatomaceous Earth** (Bulk Adsorbent)

- Improves extraction efficiency.
- Adsorbs moisture from samples.

Diatomaceous earth is used as a filter aid to improve extraction efficiency of densely packed soils, such as clays. By mixing the sample with diatomaceous earth, recoveries can be improved and excess moisture can be absorbed. Packaged in a convenient 1 kg quantity.

Description	Similar to Dionex Part #	qty.	cat.#
Diatomaceous Earth, 30/40 mesh	062819	1 kg	26033





QuEChERS Products

Ideal for multiresidue pesticide analysis from food and other matrices.

Restek Q-sep® QuEChERS Products






Fast, Simple Sample Prep for Multiresidue Pesticide Analysis

- Ready-to-use tubes, no glassware required.
- Preweighed, ultra-pure sorbents.
- Support original unbuffered, AOAC (2007.01), European (EN 15662), and mini-multiresidue QuEChERS methods.

QuEChERS methods are fast, easy, and cost-effective, and Restek Q-sep® products make QuEChERS procedures even simpler. All extraction salts, sorbents, and sample tubes are included—no specialized equipment or glassware is required. Prepare samples more efficiently with a complete line of QuEChERS supplies from Restek.

	Mini-Luke or Modified Luke Method	QuEChERS	Savings with QuEChERS
Estimated time to process 6 samples (min)	120	30	4x faster
Solvent used (mL)	60-90	10	6-9x less solvent
Chlorinated waste (mL)	20-30	0	Safer, cheaper, greener
Glassware/specialized equipment	capacity for 200 mL, quartz wool, funnel, water bath or evaporator	none	Ready-to-use

Selection Guide for Q-sep® QuEChERS dSPE Tubes

Commodity types and examples	AOAC 2007.01	EN 15662	Mini-multiresidue	Additional products
 Low fat & low pigment fruits & vegetables <ul style="list-style-type: none"> • Celery • Cucumber • Head lettuce • Melon 	2 mL, 100-pk. (cat.# 26124) 15 mL, 50-pk. (cat.# 26220)	2 mL, 100-pk. (cat.# 26215) 15 mL, 50-pk. (cat.# 26223)	2 mL, 100-pk. (cat.# 26215)	
 Fatty or waxy fruits & vegetables <ul style="list-style-type: none"> • Cereals • Avocado • Nuts & seeds • Dairy 	2 mL, 100-pk. (cat.# 26125) 15 mL, 50-pk. (cat.# 26221)		2 mL, 100-pk. (cat.# 26216)	15 mL, 50-pk. (cat.# 26226) 2 mL, 100-pk. (cat.# 26242) 15 mL, 50-pk. (cat.# 26244)
 Pigmented fruits & vegetables <ul style="list-style-type: none"> • Strawberries • Sweet potatoes • Tomatoes 	15 mL, 50-pk. (cat.# 26222)	2 mL, 100-pk. (cat.# 26217) 15 mL, 50-pk. (cat.# 26224)	2 mL, 100-pk. (cat.# 26217)	2 mL, 100-pk. (cat.# 26123)
 Highly pigmented fruits & vegetables <ul style="list-style-type: none"> • Red peppers • Spinach • Blueberries 	2 mL, 100-pk. (cat.# 26219)	2 mL, 100-pk. (cat.# 26218) 15 mL, 50-pk. (cat.# 26225)	2 mL, 100-pk. (cat.# 26218)	15 mL, 50-pk. (cat.# 26126)
 Universal use Wide range of commodities, including fatty & pigmented fruits & vegetables.				2 mL, 100-pk. (cat.# 26243) 15 mL, 50-pk. (cat.# 26245)
Download free instructions at www.restek.com/quechers	Instruction sheet# 805-01-002	Instruction sheet# 805-01-001	Instruction sheet# 805-01-001	Generic dSPE 805-01-003

Q-sep® QuEChERS Extraction Salts

- Salt packets eliminate the need for a second empty tube to transfer salts.
- Go green by using packets with reusable tubes.
- Convenient and easy to use.

Description	Material	Methods	qty.	cat.#
Q-sep QuEChERS Extraction Kit (Original)	4 g MgSO ₄ , 1 g NaCl with 50 mL Centrifuge Tube	original unbuffered	50 packets & 50 tubes	23991
Q-sep QuEChERS Extraction Salt Packets Only (Original)	4 g MgSO ₄ , 1 g NaCl	original unbuffered	50 packets	23992
Q-sep QuEChERS Extraction Kit (EN)	4 g MgSO ₄ , 1 g NaCl, 1 g TSCD, 0.5 g DHS with 50 mL Centrifuge Tube	European EN 15662	50 packets & 50 tubes	26235
Q-sep QuEChERS Extraction Salt Packets Only (EN)	4 g MgSO ₄ , 1 g NaCl, 1 g TSCD, 0.5 g DHS	European EN 15662	50 packets	26236
Q-sep QuEChERS Extraction Kit (AOAC)	6 g MgSO ₄ , 1.5 g NaOAc with 50 mL Centrifuge Tube	AOAC 2007.01	50 packets & 50 tubes	26237
Q-sep QuEChERS Extraction Salt Packets Only (AOAC)	6 g MgSO ₄ , 1.5 g NaOAc	AOAC 2007.01	50 packets	26238
Empty 50 mL Centrifuge Tube, Polypropylene			50-pk.	26239
Empty 50 mL Centrifuge Tube, FEP			2-pk.	23997

TSCD—trisodium citrate dihydrate

DHS—disodium hydrogen citrate sesquihydrate

NaOAc—sodium acetate

**Q-sep® QuEChERS dSPE Tubes for Extract Cleanup**

Packaged in foil subpacks of 10 for enhanced protection and storage stability.

Description	Methods	qty.	cat.#
2 mL Micro-Centrifuge Tubes Prefilled with dSPE Materials for Cleanup (1 mL Extract)			
150 mg MgSO ₄ , 25 mg PSA	original unbuffered, mini-multi-residue, European EN 15662	100-pk.	26215
150 mg MgSO ₄ , 25 mg PSA, 25 mg C18	mini-multi-residue	100-pk.	26216
150 mg MgSO ₄ , 25 mg PSA, 2.5 mg GCB	mini-multi-residue, European EN 15662	100-pk.	26217
150 mg MgSO ₄ , 25 mg PSA, 7.5 mg GCB	mini-multi-residue, European EN 15662	100-pk.	26218
150 mg MgSO ₄ , 50 mg PSA	AOAC 2007.01	100-pk.	26124
150 mg MgSO ₄ , 50 mg PSA, 50 mg C18	AOAC 2007.01	100-pk.	26125
150 mg MgSO ₄ , 50 mg PSA, 50 mg GCB	AOAC 2007.01	100-pk.	26123
150 mg MgSO ₄ , 50 mg PSA, 50 mg C18, 50 mg GCB	AOAC 2007.01	100-pk.	26219
150 mg MgSO ₄ , 50 mg C18	NA	100-pk.	26242
150 mg MgSO ₄ , 50 mg PSA, 50 mg C18, 7.5 mg GCB	universal	100-pk.	26243

15 mL Centrifuge Tubes Prefilled with dSPE Materials for Cleanup (6 mL and 8 mL Extract)

1,200 mg MgSO ₄ , 400 mg PSA	AOAC 2007.01	50-pk.	26220
1,200 mg MgSO ₄ , 400 mg PSA, 400 mg C18	AOAC 2007.01	50-pk.	26221
1,200 mg MgSO ₄ , 400 mg PSA, 400 mg C18, 400 mg GCB	AOAC 2007.01	50-pk.	26222
1,200 mg MgSO ₄ , 400 mg C18	similar to AOAC 2007.01	50-pk.	26244
900 mg MgSO ₄ , 150 mg PSA	original unbuffered, European EN 15662	50-pk.	26223
900 mg MgSO ₄ , 150 mg PSA, 15 mg GCB	European EN 15662	50-pk.	26224
900 mg MgSO ₄ , 150 mg PSA, 45 mg GCB	European EN 15662	50-pk.	26225
900 mg MgSO ₄ , 150 mg PSA, 150 mg C18	similar to European EN 15662	50-pk.	26226
900 mg MgSO ₄ , 300 mg PSA, 300 mg C18, 45 mg GCB	similar to European EN 15662	50-pk.	26245
900 mg MgSO ₄ , 300 mg PSA, 150 mg GCB	NA	50-pk.	26126

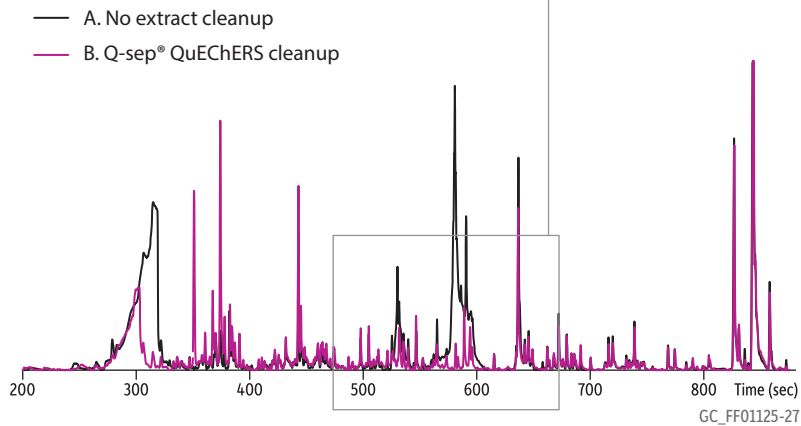
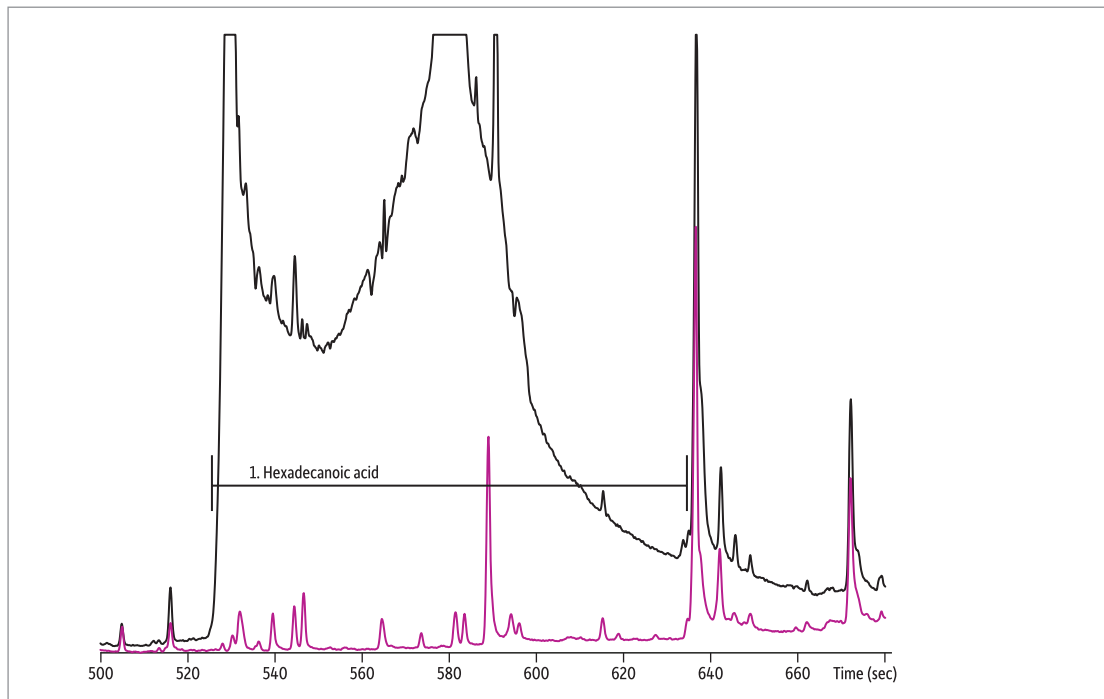
PSA—primary and secondary amine

GCB—graphitized carbon black

**Multiple sorbents are used to extract different types of interferences.**

MgSO ₄	removes excess water
PSA	removes sugars, fatty acids, organic acids, and anthocyanine pigments
C18	removes nonpolar interferences
GCB	removes pigments, sterols, and nonpolar interferences

Use Q-sep® QuEChERS tubes to easily remove matrix interferences.



Column Rxi®-5Sil MS, 20 m, 0.18 mm ID, 0.18 µm (cat.# 43602)
Sample Sweet potato spiked with pesticide mix and extracted with acetonitrile and Q-sep® QuEChERS EN Method 15662 extraction salts

Injection

Inj. Vol.: 1.0 µL splitless (hold 1 min)
 Liner: Single taper (4 mm) w/deact. wool (cat.# 22405)
 Inj. Temp.: 250 °C

Oven

Oven Temp.: 72.5 °C (hold 1 min) to 350 °C at 20 °C/min

Carrier Gas

He, constant flow

Flow Rate:

1.2 mL/min

Detector

MS

Mode:

Transfer Line

Temp.: 300 °C

Analyzer Type:

TOF

Ionization Mode:

EI

Acquisition Range:

45-550 amu

Instrument

Agilent/HP6890 GC

Notes

A. Extract (without cleanup step) acidified with formic acid to pH 5
 B. Extract with cleanup using Q-sep® QuEChERS dSPE cleanup tube (cat.# 26124) acidified with formic acid to pH 5.

Scan range: m/z 60, 73, 87, 129, 256 plotted

Q-sep® 3000 Centrifuge for QuEChERS

- Meets or exceeds requirements of original unbuffered, AOAC, and European QuEChERS methodology.
- Supports 50 mL, 15 mL, and 2 mL centrifuge tubes.
- Small footprint requires less bench space.
- Safe and reliable—UL, CSA, and CE approved; 1-year warranty.

Priced to fit your laboratory's budget, the Q-sep® 3000 centrifuge is the first centrifuge specifically designed for QuEChERS methodology. This compact, quiet, yet powerful unit spins at the 3,000 g force required by the European method.

Centrifuge includes 50 mL tube carriers (six), 50 mL conical tube inserts (six), 4-place 15 mL tube carriers (six), and 2 mL tube adaptors (24).

Specifications:

Motor Speed and Force Rating: 4,130 rpm, 3,000 xg
 Maximum Capacity with 6-Place Horizontal Rotor:
 6 x 50 mL tubes, 18 x 15 mL tubes, 24 x 2 mL tubes
 Motor: 1/2 H.P. brushless DC
 Nominal Acceleration Time: 45 seconds
 Nominal Braking Time: 60 seconds
 Timer (electronic): 1 to 30 minutes +/-1%
 Requirement: 2.0 or 1.0 amps
 Current Voltage Requirement: 115 or 230 (+/-10%) volts
 Frequency: 50 / 60 Hz
 Centrifuge Protection Breaker: 4 amp resettable
 Overall Dimensions:
 9" h x 14.5" w x 17" d (22.9 cm x 36.8 cm x 43.2 cm)
 Weight: 39 lb (17.7 kg)

Description	qty.	cat.#
Q-sep 3000 Centrifuge, 110V	ea.	26230
Q-sep 3000 Centrifuge, 220V	ea.	26231
Replacement Accessories		
50 mL Tube Carrier for Q-sep 3000 Centrifuge	2-pk.	26232
50 mL Conical Tube Insert for Q-sep 3000 Centrifuge	6-pk.	26249
15 mL 4-Place Tube Carrier for Q-sep 3000 Centrifuge (fits four 15 mL tubes)	2-pk.	26233
2 mL Tube Adaptors for Q-sep 3000 Centrifuge	4-pk.	26234

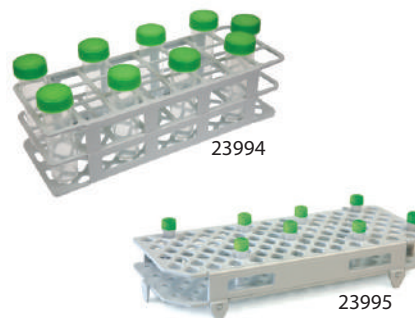


Dimensions: 9" h x 14.5" w x 17" d
(22.9 cm x 36.8 cm x 43.2 cm)

**Q-sep® Tube Racks**

- Available for 2 mL, 15 mL, and 50 mL tubes.
- Alphanumerical grid reference on top tier for easy identification of samples.
- Easy to assemble; simply fold and snap together securely.

Description	Size	Material	qty.	cat.#
Q-sep Tube Rack for 2 mL Centrifuge Tube	Holds 100	Polypropylene, White	ea.	23995
Q-sep Tube Rack for 15 mL Centrifuge Tube	Holds 60	Polypropylene, White	ea.	23993
Q-sep Tube Rack for 50 mL Centrifuge Tube	Holds 24	Polypropylene, White	ea.	23994

**Q-sep® Bottle Top Solvent Dispenser**

- Adjustment knob offers 56 output volume settings from 2.5 mL to 30 mL per stroke (0.5 mL increments)—ideal for QuEChERS methods!
- Base features 30 mm threads and includes four adaptors (25 mm, 28 mm, 38 mm, and 45 mm).
- Individually calibrated in accordance with ISO 8655 standards (certificate included) and can also be recalibrated by the user.
- PTFE, glass, and polypropylene construction for excellent chemical compatibility and 100% autoclavability.
- Integral safety discharge reduces risk of accidental dispensing, and nozzle cap prevents dripping.
- Easy to disassemble for cleaning and servicing.

Accurately and precisely dispense liquids for QuEChERS extractions with this versatile pump. A quick, simple adjustment lets you set the output volume anywhere from 2.5 mL to 30 mL per stroke, and the included adaptors will accommodate most reagent bottles.



23990
Bottle not included.

Description	qty.	cat.#
Q-sep Bottle Top Solvent Dispenser, 2.5 mL–30 mL	ea.	23990

Sample Filtration



Cut costs, not quality!

Syringe Filters with Luer Lock Inlet

- Luer lock inlet offers leak-tight syringe connection.
- Variety of filter types, porosities, and diameters.
- Color coded for easy identification.
- Rugged polypropylene housing.
- Autoclavable to 121 °C for 15 minutes.
- Quantity break pricing for greater savings.



Size	Porosity	Color	qty.	cat.#
Cellulose Acetate				
4 mm	0.22 µm	green	100-pk.	23972
4 mm	0.45 µm	blue	100-pk.	23973
13 mm	0.22 µm	red	100-pk.	26156
13 mm	0.45 µm	red	100-pk.	26155
25 mm	0.22 µm	red	100-pk.	26158
25 mm	0.45 µm	red	100-pk.	26157
30 mm	0.22 µm	red	100-pk.	23982
30 mm	0.45 µm	red	100-pk.	23983
Nylon				
4 mm	0.22 µm	yellow	100-pk.	23970
4 mm	0.45 µm	pink	100-pk.	23971
13 mm	0.22 µm	pink	100-pk.	26146
13 mm	0.45 µm	pink	100-pk.	26147
25 mm	0.22 µm	pink	100-pk.	26148
25 mm	0.45 µm	pink	100-pk.	26149
30 mm	0.22 µm	pink	100-pk.	23980
30 mm	0.45 µm	pink	100-pk.	23981
PES (polyethersulfone)				
4 mm	0.22 µm	white	100-pk.	23978
4 mm	0.45 µm	blue	100-pk.	23979
13 mm	0.22 µm	green	100-pk.	23966
13 mm	0.45 µm	green	100-pk.	23967
25 mm	0.22 µm	green	100-pk.	23968
25 mm	0.45 µm	green	100-pk.	23969
30 mm	0.22 µm	green	100-pk.	23988
30 mm	0.45 µm	green	100-pk.	23989
PTFE (polytetrafluoroethylene)				
4 mm	0.22 µm	purple	100-pk.	23974
4 mm	0.45 µm	orange	100-pk.	23975
13 mm	0.22 µm	white	100-pk.	26142
13 mm	0.45 µm	white	100-pk.	26143
25 mm	0.22 µm	white	100-pk.	26144
25 mm	0.45 µm	white	100-pk.	26145
30 mm	0.22 µm	white	100-pk.	23984
30 mm	0.45 µm	white	100-pk.	23985
PVDF (polyvinylidene difluoride)				
4 mm	0.22 µm	brown	100-pk.	23976
4 mm	0.45 µm	red	100-pk.	23977
13 mm	0.22 µm	blue	100-pk.	26150
13 mm	0.45 µm	blue	100-pk.	26151
25 mm	0.22 µm	blue	100-pk.	26152
25 mm	0.45 µm	blue	100-pk.	26153
30 mm	0.22 µm	blue	100-pk.	23986
30 mm	0.45 µm	blue	100-pk.	23987

Syringe filters are for laboratory use only.

Membrane selection guide

Membrane	Properties	Applications	Incompatible with
Cellulose Acetate	hydrophilic	aqueous solutions	organic solvents
Nylon	hydrophilic, low protein binding	bases, HPLC solvents, alcohols, aromatic hydrocarbons	acids, aggressive halogenated hydrocarbons, proteins
PES	hydrophilic, low protein binding, fast flow rates	filtration of buffers & culture media	—
PTFE	hydrophobic	organic solvents, acids, alcohols, bases, aromatics	aqueous samples without pre-wetting (to avoid high backpressure)
PVDF	hydrophilic, low protein binding	alcohols, biomolecules	bases, esters, ethers, ketones
Cellulose Acetate, Nylon, PES, PVDF—hydrophilic applications			
PTFE—hydrophobic applications			

Syringe Filters Compatibility Chart

Group of Substance & Chemical Reagents	Cellulose Acetate	Nylon	PES	PTFE	PVDF
ACIDS					
Acetic, 5%	L	R	R	R	R
Acetic, 10%	L	R	R	R	R
Acetic, 25%	N	L	R	R	R
Acetic, Glacial	N	N	R	R	R
Boric	-	L	-	R	-
Formic 25%	L	N	-	R	-
Hydrochloric 15%	L	L	R	R	L
Hydrochloric 25%	N	N	R	R	-
Hydrochloric concentrated	N	N	L	R	N
Hydrofluoric 10%	N	N	-	-	-
Hydrofluoric 35%	N	N	-	R	-
Nitric 25%	N	N	R	R	-
Nitric 6N, 38%	N	N	L	R	R
Nitric concentrated	N	N	N	R	N
Phosphoric 25%	L	N	R	R	-
Sulfuric 25%	N	N	N	R	-
Sulfuric 6N, 29%	N	N	N	R	-
Sulfuric concentrated	N	N	N	R	N
Trichloroacetic 10%	N	N	-	R	R
ALKALINES					
Ammonium Hydroxide 25%	N	R	R	R	L
Formalin 30%	L	L	R	-	-
Sodium Hydroxide 3N, 12%	N	R	R	R	R
ALCOHOLS					
Amyl Alcohol	L	R	N	R	R
Benzyl Alcohol	L	L	L	L	L
Butyl Alcohol	L	R	L	R	R
Butyl Cellosolve	N	L	-	L	-
Ethanol 70%	L	R	L	R	R
Ethanol 98%	N	R	N	R	R
Ethylene glycol	L	R	R	R	R
Glycerol	L	R	R	R	R
Isobutyl Alcohol	L	L	L	L	L
Isopropanol, <i>n</i> -Propanol	L	R	R	R	R
Methanol 98%	N	R	L	R	R
Methyl Cellosolve	L	L	-	L	-
Propylene glycol	L	-	R	R	R
Phenol, Aqueous 10%	-	R	-	R	R

R = Recommended. No significant change observed in flow rate or bubble point of the membrane, nor visible indication of chemical attack.

L = Limited Recommended Use. Moderate changes in physical properties. The filter may be suitable for short term, non-critical use.

N = Not Recommended. The membrane may be unstable.

- = Insufficient Data. Information is not available. Trial testing is recommended.

Group of Substance & Chemical Reagents	Cellulose Acetate	Nylon	PES	PTFE	PVDF
HYDROCARBONS					
Hexane	L	R	L	R	R
Xylene	L	R	N	R	R
Kerosene, Gasoline	L	R	R	R	R
Tetralin, Decalin	N	R	-	R	R
Toluene, benzene	L	R	N	R	R
HALOGENATED HYDROCARBONS					
Carbon Tetrachloride	N	N	N	N	N
Chloroform	N	N	N	R	R
Methylene Chloride	N	L	N	R	N
Monochlorobenzene	N	N	-	R	-
Trichloroethylene	N	N	N	R	R
KETONES					
Acetone	N	R	N	R	N
Cyclohexanone	N	L	N	R	N
Isopropylacetone	-	R	-	R	N
Methyl Ethyl Ketone	N	R	N	R	N
Methyl Isobutyl Ketone	N	R	-	R	N
ESTERS					
Amyl Acetate	N	R	L	R	-
Amyl Propyl & Butyl Acetate	L	-	-	R	-
Benzyl Benzoate	-	-	-	R	-
Butyl Acetate	N	-	N	-	-
Ethyl Acetate & Methyl Acetate	N	R	N	R	R/L
Isopropyl Myristate	-	-	-	R	-
Methyl Cellosolve Acetate	N	-	-	R	-
Propylene Glycol Acetate	-	-	-	R	-
Tricresyl Phosphate	-	-	-	R	-
Isopropyl Acetate	L	R	-	-	R
OXIDES - ETHERS					
Dimethylsulfoxide (DMSO)	N	R	N	R	N
Dioxane & Tetrahydrofuran	N	R	L	R	L
Ethyl Ether	L	R	R	R	R
Isopropyl Ether	-	-	-	R	R
SOLVENTS WITH NITROGEN					
Acetonitrile	N	R	N	R	N
Aniline	N	-	-	R	-
Diethylacetamide	N	L	N	R	N
Dimethyl Formamide	N	R	N	R	N
Pyridine	N	R	N	R	-
Triethanolamine	-	R	-	R	N
MISCELLANEOUS					
Formaldehyde Solution 30%	L	R	R	R	R
Hydrogen Peroxide 30%	N	L	N	R	R
Pyridine	N	R	N	R	R
Silicone Oil & Mineral Oil	R	R	R	R	R

Sample Filtration



Simply squeeze particulates and contaminants out of your sample!

Thomson SINGLE StEP® Filter Vials

- Easy-to-use vials offer fast sample filtration and require only a squeeze of your fingers.
- Color-coded caps allow easy identification of 0.2 µm or 0.45 µm membranes in PVDF, PTFE, PES, or nylon.
- Pre-slit PTFE/silicone caps help eliminate broken autosampler needles and cored septa.
- Low dead volume units feature rugged polypropylene vial and insert with 450 µL loading capacity.
- Fit most standard 12 x 32 mm autosamplers, including UHPLC instruments.



Now available in convenient 100-pks.



Porosity	Color	qty.	cat.#
Nylon			
0.2 µm	black cap	100-pk.	25891
0.45 µm	pink cap	100-pk.	25892
PES (polyethersulfone)			
0.2 µm	grey cap	100-pk.	25897
0.45 µm	orange cap	100-pk.	25898
PTFE (polytetrafluoroethylene)			
0.2 µm	green cap	100-pk.	25893
0.45 µm	blue cap	100-pk.	25894
PVDF (polyvinylidene fluoride)			
0.2 µm	red cap	100-pk.	25895
0.45 µm	yellow cap	100-pk.	25896

Patent No. 7,790,117

Filter Vials Compatibility Chart

Most solvents and mobile phases used in liquid chromatography are also compatible with SINGLE StEP® filter vials.

Solvent / Mobile Phase	HOUSINGS		FILTERS		
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyethersulfone)	NYL (nylon)
Acetic Acid (glacial) <i>acid, organic</i>	L	R	R	R	N
Acetone <i>ketone</i>	R	R	N	N	R
Acetonitrile (ACN) <i>nitrile</i>	R	R	L	N	R
Alconox, 1% <i>surfactant/detergent</i>	L	L	L	L	L
Ammonium Hydroxide <i>caustic</i>	L	R	R	N	L
Ammonium Sulfate (saturated) <i>salt, aqueous solution</i>	R	R	N	L	R
Amyl Acetate <i>ester</i>	L	R	R	R	L
Amyl Alcohol <i>alcohol</i>	R	R	R	R	L
Benzene <i>HC, aromatic</i>	N	R	R	N	R
Benzyl Alcohol <i>HC aromatic/alcohol</i>	N	R	R	L	L
Boric Acid (aqueous solution) <i>acid, inorganic</i>	R	R	L	R	R
Butyl Acetate <i>ester</i>	L	R	L	N	R
Butyl Alcohol <i>alcohol</i>	R	R	R	R	R
Carbon Tetrachloride <i>HC, halogenated</i>	N	R	R	N	L
Cellosolve (ethyl) <i>glycol ether</i>	R	R	L	R	R
CHAPS (aqueous solution) <i>surfactant/detergent</i>	L	L	L	L	L
Chloroform <i>HC, halogenated</i>	N	R	R	N	N
Cyclohexanone <i>ketone</i>	N	R	N	N	R
Diethyl Pyrocarbonate, 0.2% <i>carboxylic anhydride</i>	L	L	L	L	L
Dimethyl Sulfoxide (DMSO) <i>sulfoxide</i>	R	R	N	N	R
Dimethylacetamide <i>amide</i>	R	R	N	N	N
Dimethylformamide <i>amide</i>	R	R	N	L	R
Dioxane <i>ether</i>	R	R	R	L	R
Ethers <i>ether</i>	N	R	R	L	R

Continued on next page

Filter Vials Compatibility Chart

Continued from previous page

Solvent / Mobile Phase	HOUSINGS		FILTERS		
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Ethyl Acetate ester	L	R	R	N	R
Ethyl Alcohol alcohol	R	R	R	R	L
Ethylene Glycol glycol	R	R	R	R	R
Formaldehyde aldehyde	R	R	R	L	R
Formic Acid, 50% acid, organic	R	R	R	L	N
Freon® (TF or PCA) HC, halogenated	R	R	R	L	R
Gasoline HC	N	R	R	R	R
Glycerine (Glycerol) glycol	R	R	R	R	R
Guanidine Hydrochloride, 6M salt, aqueous solution	L	R	L	L	L
Guanidine Thiocyanate, 5M salt, aqueous solution	L	R	L	L	L
Helium gas	R	R	L	L	R
Hexane HC, aliphatic	N	R	R	R	R
Hydrochloric Acid, 1N (HCL) acid, inorganic	R	R	R	R	R
Hydrochloric Acid, 6N (HCL) acid, inorganic	L	R	L	R	L
Hydrochloric Acid, conc. (HCL) acid, inorganic	N	R	N	L	N
Hydrofluoric Acid acid, inorganic	N	R	N	N	N
Hydrogen gas	R	R	R	L	R
Hydrogen Peroxide, 3% peroxide	R	R	R	L	R
Hydrogen Peroxide, 30% peroxide	L	R	R	L	L
Hydrogen Peroxide, 90% peroxide	R	R	R	L	N
HYPO (aqueous solution) salt, aqueous solution	R	R	R	L	R
Isobutyl Alcohol alcohol	R	R	R	R	L
Isopropyl Acetate ester	L	R	R	N	R
Isopropyl Alcohol alcohol	R	R	R	R	L
Kerosene HC	L	L	R	R	R
Lactic Acid, 50% acid, organic/alcohol	R	R	L	L	L
Lubrol PX (aqueous solution) surfactant/detergent	L	L	L	L	L
Methyl Ethyl Ketone (MEK) ketone	R	R	N	N	R
Mercaptoethanol, 0.1M alcohol/mercaptan	L	L	L	L	L
Methyl Acetate ester	L	R	N	N	R
Methyl Alcohol alcohol	R	R	R	R	L
Methylene Chloride HC, halogenated	N	R	N	N	L

Solvent / Mobile Phase	HOUSINGS		FILTERS		
	PP (polypropylene)	PTFE (polytetrafluoroethylene)	PVDF (polyvinylidene fluoride)	PES (polyether sulfone)	NYL (nylon)
Methyl Isobutyl Ketone (MIBK) ketone	N	R	N	N	R
Mineral Spirits HC	N	R	R	R	R
Nitric Acid, 6N acid, inorganic	L	R	R	R	N
Nitric Acid (concentrated) acid, inorganic	N	L	N	L	N
Nitrobenzene HC, aromatic	N	R	R	L	R
Nitrogen gas	L	R	R	L	R
Nonidet-P40 (aqueous solution) surfactant/detergent	L	L	L	L	L
Ozone gas	N	R	R	L	N
Paraldehyde aldehyde	L	R	L	L	R
Pentane HC, aliphatic	N	R	R	R	R
Petroleum Ether ether	L	R	R	L	R
Phenol (aqueous solution) phenol	N	R	R	L	N
Potassium Hydroxide, 3N caustic	R	R	R	L	R
Pyridine amine	R	R	N	N	L
Silicone Oils silicone	R	R	R	L	R
Sodium Carbonate (aqueous solution) salt, aqueous solution	R	R	R	L	L
Sodium Chloride (aqueous solution) salt, aqueous solution	R	R	R	L	R
Sodium Dodecyl Sulfate surfactant/detergent	L	L	L	L	L
Sodium Hydroxide, 3N caustic	R	R	R	R	R
Sodium Hydroxide (concentrated) caustic	R	R	R	R	N
Sulfuric Acid (concentrated) acid, inorganic	N	R	L	N	N
TCA (aqueous solution) acid, organic	R	R	R	L	L
Tetrahydrofuran (THF) ether	N	R	N	L	R
Toluene HC, aromatic	N	R	R	R	R
Trichloroethane HC, halogenated	N	R	L	N	L
Trichloroethylene HC, halogenated	N	R	R	N	L
Tween 20 (aqueous solution) surfactant/detergent	L	R	L	L	L
Urea, 8M salt, aqueous solution	R	R	R	L	R
Water (Brine) salt, aqueous solution	R	R	R	L	R
Xylene HC, aromatic	N	R	R	L	R

R = Recommended. No significant change observed in flow rate or bubble point of the membrane, nor visible indication of chemical attack.

L = Limited Recommended Use. Moderate changes in physical properties. The filter may be suitable for short term, non-critical use.

N = Not Recommended. The membrane may be unstable.

- = Insufficient Data. Information is not available. Trial testing is recommended.

Accelerated Solvent Extraction (ASE)

Accelerated solvent extraction is a common technique for fast and reliable extraction of organic materials from solid matrices using EPA SW-846 Method 3545, Pressurized Fluid Extraction (PFE). Restek offers a wide range of replacement parts to keep your extraction system running smoothly. All parts are economically priced to save you money and are designed to meet or exceed the performance of the original manufacturer's parts.

Replacement Parts for ASE® 150/350 Systems, Manufacturer's Design

Extraction Cell Bodies for ASE® 150/350 Systems

- Cell bodies are serialized for easy sample identification.
- Smooth inner surfaces for easier cleaning.



Extraction Cell Body	Similar to Dionex Part #	Stainless Steel qty.	Stainless Steel cat.#
1 mL for ASE 150/350	068261	ea.	25993
5 mL for ASE 150/350	068262	ea.	25994
10 mL for ASE 150/350	068263	ea.	25995
22 mL for ASE 150/350	068264	ea.	25996
34 mL for ASE 100/300 and 150/350	056646	ea.	26176
66 mL for ASE 100/300 and 150/350	056696	ea.	26178
100 mL for ASE 100/300 and 150/350	056693	ea.	26132

Extraction Cell Caps for ASE® 150/350 Systems

- Smooth inner surfaces for easier cleaning.
- Caps include frit, PEEK washer, PTFE O-ring, threaded insert, and snap ring.

Description	Stainless Steel qty.	Stainless Steel cat.#
Replacement Extraction Cell End Caps for ASE 150/350	2-pk.	25997

Q-sep® QuEChERS Products

Quick, Easy, Cheap, Effective, Rugged and Safe!

Standards Available!

Standards for AOAC QuEChERS Method 2007.01

See **page 575** for:

- AOAC IS Solutioncat.# 31963
- AOAC TPP Solutioncat.# 31964
- AOAC QC Spike Mix.....cat.# 31999

www.restek.com/quenchers



Replacement Parts for ASE® 200 Systems, Manufacturer's Design

Extraction Cell Bodies for ASE® 200 Systems

- Cell bodies are serialized for easy sample identification.
- Smooth inner surfaces for easier cleaning.

Extraction Cell Body	Similar to	Stainless Steel	
	Dionex Part #	qty.	cat.#
1 mL for ASE 200	054973	ea.	26110
5 mL for ASE 200	054974	ea.	26112
11 mL for ASE 200	048820	ea.	26114
22 mL for ASE 200	048821	ea.	26098
33 mL for ASE 200	048822	ea.	26116



Cell bodies are serialized for easy sample identification.

Extraction Cell Caps & Replacement Parts for ASE® 200 Systems

- Smooth inner surfaces for easier cleaning.
- Caps include frit, PEEK washer, PTFE O-ring, threaded insert, and snap ring.

Description	Similar to	Stainless Steel	
	Dionex Part #	qty.	cat.#
Replacement Extraction Cell End Caps for ASE 200	049450	2-pk.	26096
Threaded Cap Inserts for ASE 200	—	2-pk.	26166
Replacement Frits for ASE 200	049453	10-pk.	26100
Replacement Frits for ASE 200	049453	100-pk.	25959

Description	Similar to	Stainless Steel	
	Dionex Part #	qty.	cat.#
Snap Rings for Caps for ASE 200	049456	10-pk.	26184
Funnel for ASE 200	056958	ea.	26180
PTFE O-Rings for ASE 200 & ASE 300 Caps	049457	100-pk.	26187
Viton O-Rings for ASE 200 & ASE 300 Caps	056325	50-pk.	26188



26166



26180

PEEK Washers for ASE® 200 Systems

- Meet original equipment manufacturer's performance.
- Available in four quantities.

Description	Similar to	Stainless Steel	
	Dionex Part #	qty.	cat.#
PEEK Washers for ASE 200	049454	12-pk.	25256
		48-pk.	25257
		250-pk.	26120
		1,000-pk.	26229



25256

20 mm Filters for ASE® 200 Extraction Cells

- Cellulose or glass fiber construction.
- Fit 11 mL, 22 mL, and 33 mL cells.
- Cellulose filters available in economical 1,000-packs.

Description	Similar to	Stainless Steel	
	Dionex Part #	qty.	cat.#
Cellulose Filters for ASE 200	049458	100-pk.	26118
Cellulose Filters for ASE 200	049458	1,000-pk.	26190
Glass Fiber Filters for ASE 200	047017	100-pk.	26119



26119

60 mL Sample Collection Vials for ASE® 200 Systems

- Cleaned, assembled, and ready to use.
- Clear or amber glass.
- Caps and PTFE-lined septa included.

Description	Color	Similar to	Stainless Steel	
		Dionex Part #	qty.	cat.#
60 mL Collection Vials for ASE 200	Clear	048784	72-pk.	26121
60 mL Collection Vials for ASE 200	Amber	048781	72-pk.	26122
Replacement Septa, 24 mm x 0.125", PTFE-lined silicone	—	—	100-pk.	24694



26121

26122

Accelerated Solvent Extraction (ASE)



26167



26169



26187



26174



26188



25393



26168



26191



26260

Replacement Parts for ASE® 100/300 Systems, Manufacturer's Design

Extraction Cell Bodies for ASE® 100/300 Systems

- Cell bodies are serialized for easy sample identification.
- Smooth inner surfaces for easier cleaning.

Extraction Cell Body	Similar to Dionex Part #	Stainless Steel qty.	cat.#
34 mL for ASE 100/300 and 150/350	056646	ea.	26176
66 mL for ASE 100/300 and 150/350	056696	ea.	26178
100 mL for ASE 100/300 and 150/350	056693	ea.	26132

Extraction Cell Caps & Replacement Parts for ASE® 100/300 Systems

- Smooth inner surfaces for easier cleaning.
- Caps include frit, PEEK washer, PTFE O-ring, threaded insert, and snap ring.

Description	Similar to Dionex Part #	Stainless Steel qty.	cat.#
Replacement Extraction Cell End Caps for ASE 300	056921	2-pk.	26170
Threaded Cap Inserts for ASE 300	—	2-pk.	26167
Replacement Frits for ASE 100/300	—	6-pk.	26174

Description	Similar to Dionex Part #	qty.	cat.#
Snap Rings for Caps for ASE 100/300	056778	12-pk.	26134
Funnel for ASE 100/300	056699	ea.	26169
PTFE O-Rings for ASE 200 & ASE 300 Caps	049457	100-pk.	26187
Viton O-Rings for ASE 200 & ASE 300 Caps	056325	50-pk.	26188

PEEK Washers for ASE® 100/300 Systems

- Meet original equipment manufacturer's performance.
- Available in two quantities.

Description	Similar to Dionex Part #	qty.	cat.#
PEEK Washers for ASE 100/300	061687	12-pk.	25393
		48-pk.	25394

30 mm Filters for ASE® 100/300 Extraction Cells

- Cellulose or glass fiber construction.

Description	Similar to Dionex Part #	qty.	cat.#
Cellulose Filters for ASE 100/300	056780	100-pk.	26168
Glass Fiber Filters for ASE 100/300	056781	100-pk.	26189

250 mL Sample Collection Bottles for ASE® 100/300 Systems

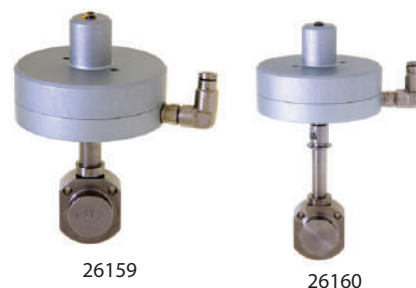
- Cleaned, assembled, and ready to use.
- Clear or amber glass.
- Caps and PTFE-lined septa included.

Description	Color	Similar to Dionex Part #	qty.	cat.#
250 mL Collection Bottles for ASE 100/300	Clear	056284	12-pk.	26191
250 mL Collection Bottles for ASE 100/300	Amber	—	12-pk.	26260
Replacement Septa, 24 mm x 0.125", PTFE-lined silicone	—	—	100-pk.	24694

Valves for ASE® 100/200/300 Systems

- Fits ASE® 100, 200, 300 systems.
- Meets original equipment manufacturer's performance.

Description	Similar to Dionex Part #	qty.	cat.#
Pressure Relief Valve for ASE 100/200/300	048889	ea.	26159
Static Valve for ASE 100/200/300	048778	ea.	26160

**Autoseal Tip Assembly for ASE® 200/300 Systems**

- Meets original equipment manufacturer's performance.
- Choose original equipment-equivalent stainless steel or Siltek® deactivation for improved inertness and extended lifetime.

Description	Similar to Dionex Part #	Stainless Steel		Siltek Treated	
		qty.	cat.#	qty.	cat.#
Autoseal Tip Assembly for ASE 200	048811	ea.	26162	ea.	26161
Autoseal Tip Assembly for ASE 300	056641	ea.	26246	ea.	26247

**Tubing Assembly for ASE® 200/300 Systems**

- Great value and improved design.
- Eliminates the need for the adaptor fitting on the static and purge valves.

Description	Similar to Dionex Part #	qty.	cat.#
Tubing Assembly for ASE 200	049311	ea.	26251
Tubing Assembly for ASE 300	057059	ea.	26248

**Cell Organizer for ASE® Parts**

- Convenient storage of extraction cell parts and consumables.
- Thirteen open bins provide easy visibility and organization for small and large pieces.
- Small footprint conserves valuable lab bench and drawer space.

Description	qty.	cat.#
Cell Organizer for ASE Parts, blue 13-bin unit, 12" l x 12" h x 7.5" d	ea.	23998



23998

Carrier Basket for ASE® Cells

- Sturdy stainless steel construction to carry full or empty ASE® cells and caps.
- Can hold twelve complete 33 mL cell assemblies and more of smaller sizes.

Description	qty.	cat.#
Carrier Basket for ASE Cells	ea.	23996



23996

Accelerated Solvent Extraction (ASE)

**Resprep® Tools** for ASE® Systems

- Use to insert filter in extraction cell or O-ring in cell cap.
- Fits all extraction cells, except 1 mL size.

Inserting a Filter Using Filter Insertion Attachment on Resprep® Tool Handle
(ASE® 100/200/300 systems)

Screw the appropriate size attachment onto the end of the Resprep™ tool handle.



Place a filter at the top of the extraction cell.



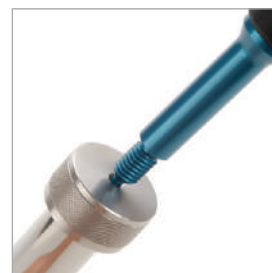
Push the filter to the bottom of the extraction cell.

Inserting an O-Ring Using Resprep® Tool Handle
(ASE® 100/200/300 systems)

Place the O-ring over the tip of the tool.



Insert the tool into the center hole of the extraction cell cap.



Press the tool firmly inside the cap until the O-ring snaps into place.

**Description**

2-in-1 Filter/O-Ring Insertion Tool Kit for ASE 100/200/300
(includes Resprep Tool Handle and Filter Insertion Attachments)

qty. **cat.#**

kit 26181

Resprep Tool Handle for ASE 100/200/300

ea. 26182

Filter Insertion Attachments (1 mL, 5 mL, 11 mL, 33 mL) for ASE 100/200/300

4-piece set 26183

**Retaining Ring Pliers** for ASE® 100/200/300 Systems

- Can be used for internal or external retaining rings.
- Works to remove retaining ring in all ASE® cell caps.

Description

Retaining Ring Pliers for ASE 100/200/300

qty. **cat.#**

ea. 26185

**Cell Cleaning Brushes** for ASE® 100/200/300 Cells

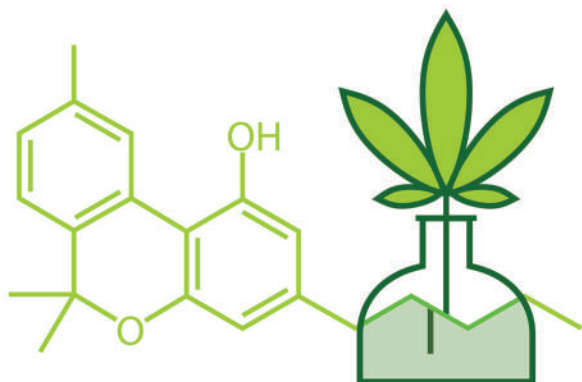
- Firm nylon bristle brushes for easy cell cleaning and removal of solid samples.
- Range of sizes to fit all extraction cells for ASE® 100, 200, and 300.

Description

Cell Cleaning Brushes

qty. **cat.#**

3-pk. 23999



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