



# Vacuum Manifolds for SPE



Teknokroma vacuum manifolds simplify SPE sample processing. These manifolds permit consistent extraction and filtration results. Analyst can save time, since these manifolds allow simultaneous multiple sample processing. The manifolds yield consistent extraction, elution and filtration results for up to 24 columns, cartridges or 25 mm syringe filters. Filters should not be attached to the vacuum manifold port prior to elution. Filters will air-lock and prevent fluid passage if used during column conditioning, sample application, or column wash. Using filters during the final elution step will ensure a clean sample for injection. Parallel processing of this kind greatly reduces the time required to prep multiple samples. The manifolds consist of a clear glass chamber to which vacuum is applied to draw a sample through on SPE column, cartridge, or disk.

Adjustable racks placed in the glass vacuum chamber will accommodate a variety of sample collection vessels, including test tubes, autosamplers, vials, volumetric flasks, and Erlenmeyer flasks. Eluants are deposited directly into the collection vessel of choice via polypropylene, optional stainless steel, or teflon needles.

Vacuum manifolds for SPE sample preparation, filtration, and elution are available in 12, 16, and 24 port configurations.

References	Description
TR-004012	12 Port Vacuum Manifold, Complete Set
TR-004416	16 Port Vacuum Manifold, Complete Set
TR-004824	24 Port Vacuum Manifold, Complete Set



Drying Attachments

## Drying Attachments

Drying attachments are available for the 12 and 24 port manifolds, which will direct the flow of air or nitrogen into the collection vessels to concentrate eluants, prior to further analysis

Drying attachments can be connected, via adapters, to SPE columns or cartridges in order to dry the column or cartridge prior to final elution.

References	Description
TR-004027	12 Positions Drying Attachment
TR-004431	16 Positions Drying Attachment
TR-004839	24 Positions Drying Attachment

Description	12 Positions	PK	16 Positions	PK	24 Positions	PK
Glass Chamber	TR-004013	1	TR-004417	1	TR-004825	1
Cover, gasket & 12 stopcocks	TR-004014	1	TR-004418	1	TR-004826	1
Gaskets	TR-004015	2	TR-004419	2	TR-004827	2
Vacuum gauge, valve, & glass chamber	TR-004016	1	TR-004420	1	TR-004828	1
Needles- Polypropylene	TR-004017	12	TR-004421	16	TR-004829	24
Needles- Stainless Steel	TR-004018	12	TR-004422	16	TR-004830	24
Collection Rack-shelves, legs, chips & posts	TR-004019	1	TR-004423	1	TR-004831	1
Plate- 13 mm	TR-004020	1	TR-004424	1	TR-004832	1
Plate- volumetric flask	TR-004021	1				
Plate- 16 mm test tube	TR-004022	1	TR-004426	1	TR-004834	1
Plate- autosampler vial	TR-004023	1				
Plate- dimple	TR-004024	1	TR-004428	1	TR-004836	1
Plate- base	TR-004025	1	TR-004429	1	TR-004837	1
Stopcocks	TR-004026	12	TR-004430	16	TR-004838	24



# Accessories for Vacuum Manifolds

## Disposable polypropylene waste container

The disposable polypropylene waste container simplifies clean-up of the vacuum chamber in 12 port manifolds. The disposable waste liner is a molded solvent resistant polypropylene liner that fits into the vacuum chamber of the 12 port manifolds. The liner is designed to contain all liquids used in SPE sample preparation. To use the liner, remove the manifold lid and take out the rack and shelf set. Place the disposable liner into the glass vacuum chamber, and replace the manifold lid. Proceed with all conditioning and sample preparation steps. Just prior to final elution, the liner, containing the waste solvents, is removed from the vacuum chamber.

There are small handles at each end of the waste liner to facilitate its removal. Replace the lid, and proceed with the final elution of the analyze. Waste solvents should be properly discarded from the liner. The liner can be cleaned and re-used a number of times, prior to discarding.



### References

TR-004028

### Description

12 Positions PP Vacuum Waste Container 10 /pkg.

## Accessories



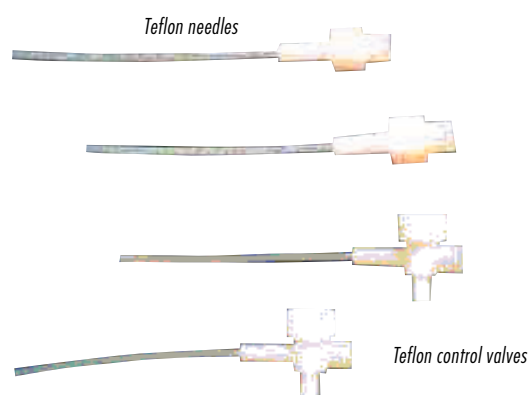
### Accessories

Female Luer Fittings	TR-004102	2
Male Luer Fittings	TR-004103	2
Support post for rack	TR-004104	3
Legs for cover- black	TR-004105	4
Vacuum gauge & valve assembly	TR-004106	1
Valve assembly only	TR-004107	1
Vacuum gauge	TR-004108	1
Retaining clips	TR-004109	12
Vacuum manifolds plugs	TR-004110	50
Adapters for columns SPE 1, 3 and 6 ml	AP-2402	10

## Disposable Teflon Needles

Disposable teflon needles and teflon needles with flow control valves are designed to fit through the manifolds lid via the luer fitting. These needles deliver the eluant directly from the SPE extraction columns or cartridge into the collection vessel in the vacuum chamber. These needles, when used in conjunction with teflon columns and teflon frits ensure zero extractables from the column, frits, and fluid path. This combination is especially useful for critical sample analysis, such as environmental samples.

Excellent solvent resistant and direct flow into the sample chambers are the key benefits.



### References

TR-004210

TR-004212

TR-004202

TR-004204

### Description

Teflon Needles

Teflon Needles

Teflon Control Valve

Teflon Control Valve

### Pkg

100

500

25

50

## Applied Separations SPE Products

Applied Separations offers a extended range of kinds and configurations in SPE. With Applied Separations extraction systems, you can assure results reproducible, less variability, and easy conversion to automatic processes thanks to the strict particle size quality control, the surface activity, pH, the flow, and the interferences.

### Spe-ed Standard Cartridges

Extraction columns in sizes: 1ml, 3ml, 6ml and 12 ml.

### Mini Spe-ed Cartridges

Cartridges designed for its manual use but also to be used in Manifolds. The Mini Spe-ed capacity is 1 ml. For silica gel, the content is 450 mg.

### Mini Spe-ed Plus Cartridges

With the same configuration as Mini Spe-ed Cartridges, but with a major capacity (2,8 ml). For silica gel, the content is 1.265 mg.



# SPE Cartridges



Mini Spe-ed and Plus cartridges



Standard Spe-ed cartridges

## Standard Spe-ed Cartridges



Standard Spe-ed Cartridges	100 mg 1 ml 100 units	200 mg 3 ml 50 units	500 mg 3 ml 50 units	500 mg 6 ml 30 units	1000 mg 6 ml 30 units	1000 mg 12 ml 20 units
<b>C18</b> Octadecyl C18/18%	AP-12001	AP-12002	AP-12003	AP-12006	AP-12007	AP-12009
<b>C18</b> Octadecyl C18/OH	AP-12201	AP-12202	AP-12203	AP-12206	AP-12207	AP-12209
<b>C18</b> Octyl	AP-2011	AP-2012	AP-2013	AP-2016	AP-2017	AP-2019
<b>PH</b> Phenyl	AP-2081	AP-2082	AP-2083	AP-2086	AP-2087	AP-2089
<b>CH</b> Cyclohexyl	AP-2071	AP-2072	AP-2073	AP-2076	AP-2077	AP-2079
<b>C4</b> Butyl	AP-2021	AP-2022	AP-2023	AP-2026	AP-2027	AP-2029
<b>C2</b> Ethyl	AP-2061	AP-2062	AP-2063	AP-2066	AP-2067	AP-2069
<b>C1</b> Methyl	AP-2051	AP-2052	AP-2053	AP-2056	AP-2057	AP-2059
<b>CNe</b> Cyanopropyl (endcaped)	AP-2221	AP-2222	AP-2223	AP-2226	AP-2227	AP-2229
<b>CN</b> Cyanopropyl	AP-2201	AP-2202	AP-2203	AP-2206	AP-2207	AP-2209
<b>SI</b> Silica Gel	AP-2101	AP-2102	AP-2103	AP-2106	AP-2107	AP-2109
<b>FLO</b> Florisil	AP-2111	AP-2112	AP-2113	AP-2116	AP-2117	AP-2119
<b>ALN</b> Alumina (Neutral)	AP-2121	AP-2122	AP-2123	AP-2126	AP-2127	AP-2129
<b>ALA</b> Alumina (Acidic)	AP-2131	AP-2132	AP-2133	AP-2136	AP-2137	AP-2139
<b>ALB</b> Alumina (Basic)	AP-2141	AP-2142	AP-2143	AP-2146	AP-2147	AP-2149
<b>DIO</b> Diol	AP-2151	AP-2152	AP-2153	AP-2156	AP-2157	AP-2159
<b>COOH</b> Carboxylic Acidic	AP-2311	AP-2312	AP-2313	AP-2316	AP-2317	AP-2319
<b>SCX</b> Benzenesulfonic Acid	AP-2321	AP-2322	AP-2323	AP-2326	AP-2327	AP-2329
<b>NH 2</b> Aminopropyl	AP-2211	AP-2212	AP-2213	AP-2216	AP-2217	AP-2219
<b>PSA</b> Pri/Sec Amino	AP-2241	AP-2242	AP-2243	AP-2246	AP-2247	AP-2249
<b>DEA</b> Diethylamino	AP-2331	AP-2332	AP-2333	AP-2336	AP-2337	AP-2339
<b>N+</b> Quaternary Amino	AP-2301	AP-2302	AP-2303	AP-2306	AP-2307	AP-2309
<b>PBA</b> Phenylboronic Acid	AP-2341	AP-2342	AP-2343	AP-2346	AP-2347	AP-2349
<b>C18</b> Octadecyl C18/14%	AP-2001	AP-2002	AP-2003	AP-2006	AP-2007	AP-2009
<b>C18</b> Octadecyl C18/22%	AP-12101	AP-12102	AP-12103	AP-12106	AP-12107	AP-12109

For other Configurations (tubes 2 to 20 grs., 6 ml to 60 ml, or other Packs) please contact us.



# SPE Cartridges



## Mini Sp-ed and Mini Spe-ed Plus Cartridges

Mini Speed Cartridges	Quantity	Mini Sp-ed	Mini Speed Plus
<b>C18</b> Octadecyl C18/18%	50 units	AP-14002	AP-24002
<b>C18</b> Octadecyl C18/OH	50 units	AP-14004	AP-24004
<b>C18</b> Octyl	50 units	AP-14005	AP-24005
<b>PH</b> Phenyl	50 units	AP-14006	AP-24006
<b>CH</b> Cyclohexyl	50 units	AP-14007	AP-24007
<b>C4</b> Butyl	50 units	AP-14009	AP-24009
<b>C2</b> Ethyl	50 units	AP-14010	AP-24010
<b>C1</b> Methyl	50 units	AP-14011	AP-24011
<b>CNe</b> Cyanopropyl (endcaped)	50 units	AP-14012	AP-24012
<b>CN</b> Cyanopropyl	50 units	AP-14013	AP-24013
<b>SI</b> Silica Gel	50 units	AP-14014	AP-24014
<b>FLO</b> Florisil	50 units	AP-14015	AP-24015



Mini Speed Cartridges	Quantity	Mini Sp-ed	Mini Speed Plus
<b>ALN</b> Alumina (Neutral)	50 units	AP-14016	AP-24016
<b>ALA</b> Alumina (Acidic)	50 units	AP-14017	AP-24017
<b>ALB</b> Alumina (Basic)	50 units	AP-14018	AP-24018
<b>DIO</b> Diol	50 units	AP-14019	AP-24019
<b>COOH</b> Carboxylic Acidic	50 units	AP-14020	AP-24020
<b>SCX</b> Benzenesulfonic Acid	50 units	AP-14021	AP-24021
<b>NH 2</b> Aminopropyl	50 units	AP-14022	AP-24022
<b>PSA</b> Pri/Sec Amino	50 units	AP-14023	AP-24023
<b>DEA</b> Diethylamino	50 units	AP-14024	AP-24024
<b>N+</b> Quaternary Amino	50 units	AP-14025	AP-24025
<b>C18</b> Octadecyl C18/14%	50 units	AP-14001	AP-24001
<b>C18</b> Octadecyl C18/22%	50 units	AP-14003	AP-24003