



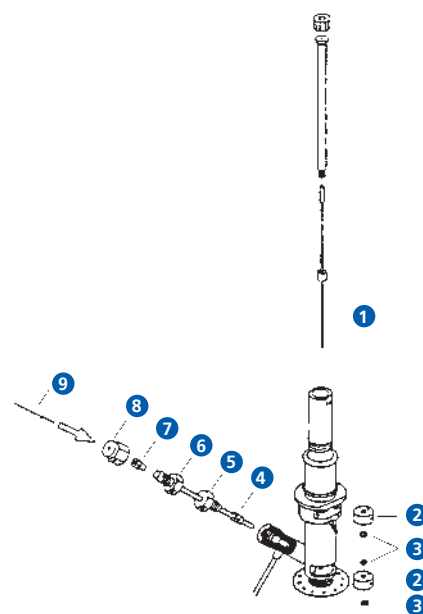
TurboMatrix Headspace Samplers

Optimize Sample Throughput with TurboMatrix™ Headspace and Headspace Trap

TurboMatrix Headspace and high-sensitivity Headspace Trap samplers provide unparalleled precision and ease of use for numerous GC or GC/MS volatile-analysis applications. The system can manage up to 12 samples simultaneously, ensuring that the next sample is ready for analysis upon completion of the previous run, achieving significant time savings.

Sample Head Assembly Replacement Parts

Description	Part No.
1 Platinum/Iridium Needle, Wide-Bore	B0144169
Platinum/Iridium Needle, Small-Bore	B0500959
Platinum/Iridium Needle, Jet	B0510364
Silcosteel Needle, for Headspace Trap Only	N6700130
Stainless Steel Needle, Wide-Bore	B0131385
Stainless Steel Needle, Small-Bore	B0500987
Stainless Steel Needle, Jet (ships with instrument)	B4000011
2 Needle Seal Assembly (without O-Rings)	B0500833
3 O-Ring for Needle Seal Assembly (pkg. 10)	B0198110
4 Vespel Ferrule 1/16 in. (pkg. 10)	09920127
5 Male Nut 1/16 in.	N9302832
6 GLT Adapter Tube	B0503956
GLT Adapter Tube, Silcosteel	N6700113
7 Graphite/Vespel Ferrule 1/16 in. x 0.4 mm For use with 0.25 mm i.d. Transfer Line, pkg. 10	09920104
Graphite/Vespel Ferrule 1/16 in. x 0.5 mm For use with 0.32 mm i.d. Transfer Line, pkg. 10	09920105
8 Nut 1/16 in. Swagelok	N9300059
9 Fused-Silica Capillary Transfer Line: 0.25 mm i.d. x 5 m length	N9301356
0.32 mm i.d. x 5 m length	N9301357



Headspace sample head assembly schematic.

Solid Glass Blocking Trap

Description	Part No.
Block for use in standard headspace mode.	N6701170

Sample Trays

For use on the Mid-Range or High-Capacity headspace sampler.

Description	Part No.
TurboMatrix 40 Mid-Range Sample Tray	M0413592
TurboMatrix 110 High-Capacity Sample Tray	M0413593

Transfer Lines

Description	Tubing i.d.	Length	Part No.
Siltek Deactivated Fused-Silica	0.25 mm	5 m	N9316607
Siltek Deactivated Fused-Silica	0.32 mm	5 m	N9316608

Miscellaneous Accessories

Description	Part No.
Gas Chromatography – Theory and Practice, Static Headspace Book by L. Ettre and B. Kolb	N1011210
TurboMatrix HS Standard Length Heated Transfer Line (960 mm) For operation up to 210 °C.	M0413643
TurboMatrix HS/HS Trap Long Heated Transfer Line (1650 mm) For operation up to 210 °C.	M0413552

Fused-Silica Capillary Transfer Line Tube i.d. (mm) Length (m)

Tube i.d. (mm)	Length (m)	Part No.
0.25	5	N9301356
0.32	5	N9301357

Siltek Deactivated Fused Silica Transfer Line

Tube i.d. (mm)	Length (m)	Part No.
0.25	5	N9316607
0.32	5	N9316608

Zero Dilution Inner Liner	N1011446
To be used with zero dilution outer liner. This powerful combination allows you to achieve lower detection limits, sharpen peak shape, and increase throughput for many routine analyses.	
Zero Dilution Capillary Injector Outer Liner	N1011445
To be used with zero dilution inner liner. The powerful combination allows you to achieve lower detection limits, sharpen peak shape, and increase throughput for many routine analyses.	
Zero Dilution PSS Injector Outer Liner	N1011447

Cold Trap Options

Headspace Trap instruments only.

Description	Part No.
TurboMatrix HS Trap Cold Trap Tube (Carbopack C)	N6200150
TurboMatrix HS Trap Air Monitoring Trap*	M0413628

*Trap comes standard with the instrument.

Tools	Part No.
O-Ring Removal Tool For replacing O-Rings in upper and lower seal assemblies.	B0147449
Headspace Vial Gauge Used to check 20 mL headspace vials for correct dimensions.	B0151737
Adapter Sleeve Torsion Bar For loosening upper seal.	B0135485
Thumbscrew Removal Tool For removing lower seal assembly.	B0131410
Spigot Key For loosening lower seal.	B0500843
Open End Wrench, 1/4 - 5/16 in. For use in mounting the Transfer Line.	09907233

Vials, Caps and Septa Kits

Features and Benefits

- Patented vial and cap design guarantees safe operation
- Manufactured to specific tolerances guaranteed to fit PerkinElmer instruments
- Lot-tested, certified and approved septa deliver reproducible results

NEW from PerkinElmer, headspace screw top vials and preassembled caps allow for samples to be taken in the field and directly analyzed on the PerkinElmer® TurboMatrix Headspace Sampler* without having to transfer the sample into another vial, streamlining the sampling process and increasing your productivity. Screw thread vials are designed for a guaranteed fit.

PerkinElmer septa are lot tested for impurities.

The cap is conveniently preassembled for ease-of-use and packed in clean Mylar® bags to reduce the risk of contamination.



Headspace Crimp-top Vials and Pre-assembled Caps

20 mL Glass, OD 23 mm x H 75.5 mm Round Bottom Vials***

Description	Pkg	Part No.
6 mL Headspace Clear Glass Vial* **	125	N9302134
Low-Volume Vial Adapter for 6 mL Vial	10	N6120110
20 mL Headspace Clear Crimp Glass Vial with P Logo	1000	B0104236
20 mL Headspace Crimp Top Vials with P Logo	100	N9306079
20 mL Headspace Crimp Top Vials with Write-On White Patch and Fill Lines	1000	N9303348
20 mL Headspace Crimp Top Vials with Write-On White Patch and Fill Lines	100	N9303349
20 mL Headspace Crimp Top Vials without Logo	1000	N9306216
Red Butyl Rubber Septa/Cap/Spring	100	B0159356
Red Butyl Rubber Septa/Cap/Spring	1000	B0159357
Red Butyl Rubber Pre-assembled	1000	N1010070
Red PTFE-Coated Butyl Rubber/Cap/Spring	100	B0104239

*Not compatible with TurboMatrix HS 110 headspace sampler

**Use with Low-Volume Vial Adapter (N6120110)

***Designed for PerkinElmer Headspace Instruments



Headspace Crimp-top Vials and Pre-assembled Caps, *continued*

Description	Pkg	Part No.
Red PTFE-Coated Butyl Rubber/Cap/Spring	1000	B0104240
Red PTFE-Coated Butyl Rubber, Pre-assembled	1000	B4000025
Aluminum-Coated Silicone, Unassembled Cap/Septa/Spring	100	B0104243
Aluminum-Coated Silicone, Unassembled Cap/Septa/Spring	1000	B0104244
Aluminum-Coated Silicone, Pre-assembled	1000	B4000028
PTFE-Coated Silicone, Unassembled Cap/Spring	100	B0104241
PTFE-Coated Silicone, Unassembled Cap/Spring	1000	B0104242
PTFE-Coated Silicone, Pre-assembled	1000	B4000022
20 mm Gray Butyl/PTFE Pre-assembled Cap/Septa/Spring	1000	N9306264
20 mm Gray Butyl/PTFE Pre-assembled Cap/Septa/Spring Clear 20 mL Headspace with Write-On Patch and Fill Lines	100	N9306265
Gray PTFE/Butyl Kit, Unassembled Cap/Septa/Spring	100	N9306266
Gray PTFE/Butyl Kit, Unassembled Cap/Septa/Spring	1000	N9306267
20 mm Gray Butyl, Pre-assembled Cap/Septa/Spring	1000	N9306268
20 mm Butyl, Pre-assembled Cap/Septa/Spring Clear 20 mL Headspace with Write-On Patch and Fill Lines	100	N9306269
Gray Butyl, Kit Unassembled Cap/Septa/Spring	100	N9306270
Gray Butyl, Kit Unassembled Cap/Septa/Spring	1000	N9306271
PTFE/Red Rubber Septa, Pre-assembled Cap/Septa/Spring	1000	N9302978
PTFE/Red Rubber Septa, Unassembled Crimp Cap/Septa/Spring	100	N9302979
PTFE/Red Rubber Septa, Unassembled Crimp Cap/Septa/Spring	1000	N9302980



Headspace Vials with Write-On Patch and Fill Lines 23 mm OD x H 75.50 mm height

20 mL Glass, OD 23 mm x H 75.5 mm Round Bottom Vials*

Description	Pkg	Part No.
20 mL Headspace Crimp Top Vials with Write-On White Patch and Fill Lines	1000	N9303348
20 mL Headspace Crimp Top Vials with Write-On White Patch and Fill Lines	100	N9303349
20 mL Headspace Screw Top Vials with Write-On White Patch and Fill Lines	1000	N9306241
20 mL Headspace Screw Top Vials with Write-On White Patch and Fill Lines	100	N9306240
10 mL Clear Crimp Top Headspace Vials, No Adaptor	100	N6356478
10 mL Clear Screw Top Headspace Vials, No Adaptor	100	N6356479
20 mL Clear Crimp Top CTC Headspace Vials	100	N6356471
20 mL Clear Screw Top CTC Headspace Vials with Write-On White Patch and Fill Lines (22.6 mm diameter)	100	N9306242

*Designed for PerkinElmer Headspace Instruments



Headspace Screw Top Vials and Pre-assembled Caps

Description	Pkg	Part No.
20 mL Headspace Screw Top Vials	100	N9306075
20 mL Headspace Screw Top Vials	1000	N9306078
18 mm PTFE/Butyl Assembled Caps/Septa 3.2 mm thickness	100	N9306076
18 mm PTFE/Silicone Assembled Caps/Septa 3.2 mm thickness	100	N9306077
18 mm Red PTFE/White Silicone Metal Screw Cap/Septa 1.3 mm thickness 8 mm hole	100	N6356474
18 mm White PTFE/Transparent Blue Silicone Metal Screw Cap/Septa 1.3 mm thickness 8 mm hole	100	N6356475
18 mm Blue PTFE/White Silicone Metal Screw Cap/Septa 1.5 mm thickness 8 mm hole	100	N6356476
18 mm Gray PTFE/Red Butyl Metal Screw Cap/Septa 1.6 mm thickness 8 mm hole	100	N6356477

Vial Rack Holder

36-Vial Polypropylene 20 mm Holder	1	N9301304
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NEW! Crimp Top Headspace Vials

20 mL, 22.6 OD x H 75.50 mm Height

Description	Pkg	Part No.
20 mL Clear 22.6 OD Glass Round Bottom Headspace Crimp Top Vials with Write-On Patch and Level Lines*	1000	N9303351
20 mL Clear 22.6 OD Glass Flat Bottom Headspace Crimp Top Vials with Write-On Patch and Level Lines **	1000	N9303352

*Recommended for the Shimadzu, Tekmar, and Varian

**Recommended for the Agilent



VOA Vials and Caps

Description	Pkg	Part No.
Vial, Screw Top, Clear Glass, size 40 mL, OD 24 mm x 98 mm H, Open Top Gray Polypropylene Closure with Teflon®/Silicone Septa, 22 mm dia., .125 mil thick	72	N6352030
Vial, Screw Top, Amber Glass, size 40 mL, OD 24 mm x 98 mm H, Open Top Gray Polypropylene Closure with Teflon®/Silicone Septa, 22 mm dia., .125 mil thick	72	N6352031
Septa, Teflon®/Silicone, 22 mm, .125 mil thick	72	N6352032
Open Top Closure, Polypropylene 24-414 Thread Cap	24	N6352033



Specialty Headspace Caps and Septa

Description	Pkg	Part No.
20 mm Extreme Low Bleed 20 mm PTFE/Natural Crimp Septa Skived PTFE 0.005"/ Natural Silicone 0.125"	1000	N9302976
20 mm Ultra Low Bleed HS Cap Non Pressure Relief Skived PTFE 0.005"/White Silicone 0.125"	1000	N9302977
20 mm Ultra Low Bleed HS Cap 20 mm Crimp Pressure Relief HS Cap Skived PTFE 0.005"/Silicone 0.125"	1000	N9302975
20 mm Gray Butyl/PTFE Pre-assembled Ridged Center Cap/Septa Non-pressure Rated	1000	N9302981

Septa Recommended Temperatures

Material	Upper Temp Limit at Vial	Inertness
Red Butyl Rubber	100 °C	Fair
Gray Butyl Rubber	130 °C	Fair
Gray PTFE-Coated Butyl Rubber	130 °C	Good
Red PTFE-Coated Butyl Rubber	100 °C	Good
Aluminum-Coated Silicone	210 °C	Good
PTFE-Coated Silicone	220 °C	Good

Crimp Top Cap and Septa – GC Headspace (CTC Autosampler)

Description	Pkg	Part No.
20 mm Magnetic Cap/Septa 8 mm Hole w/3.2 mm thickness Silicone/PTFE Transparent White Liner	100	N6356558
20 mm Magnetic Cap/Septa 8 mm Hole w/3.0 mm thickness Silicone/PTFE Transparent Blue Liner	100	N6356559
20 mm Magnetic Cap/Septa 8 mm Hole w/3.0 mm thickness PTFE/Butyl Gray	100	N6356560
20 mm Magnetic Cap/Septa 8 mm Hole w/3.0 mm thickness Gray Butyl Liner	100	N6356561
20 mm Magnetic Cap/Septa 8 mm Hole w/3.0 mm thickness Pharma Fix Butyl/PTFE	100	N6356562
20 mm Magnetic Cap/Septa 8 mm Hole w/3.2 mm thickness Aluminum/Silicone Liner	100	N6356563
20 mm Magnetic Cap/Septa 8 mm Hole w/1.3 mm thickness Silicone/PTFE Trans Blue (SPME liner)	100	N6356564
20 mm Magnetic Bi-Metal Cap/Septa w/3.0 mm 8 mm thickness PTFE/Blue Liner	100	N6356565
20 mm Bi-Metal Cap/Septa w/3.0 mm Silicone 8 mm thickness PTFE Transparent Blue Liner	100	N6356566

Headspace Vials/Septa/Caps Kits

PerkinElmer understands your challenges and offers a variety of kits so that you can easily order and restock your laboratory supplies.

HEADSPACE STARTER KIT

Offers a variety of headspace consumables so you can evaluate different types of septa and vials for your sampling requirements.

Description	Pkg	Qty	Part No.
TurboMatrix Headspace Starter Kit			N6710195
20 mL Headspace Crimp Vials	100	5	N9306079
20 mm PTFE/Butyl Septa/Cap/Springs	100	1	B0104239
20 mm PTFE/Silicone Septa/Cap/Springs	100	1	B0104241
20 mm Aluminum Silicone Septa/Cap/Springs	100	1	B0104243
O-Rings	10	1	B0198110
Needle Seal Assemblies	10	2	B0500833
Pressure Gauge with Needle for Vials	1	1	B0501377
“Static Headspace Gas Chromatography Theory and Practice” Book by B. Kolb and L.S. Ettre	1	1	N1011210
20 mm Hand Crimper	1	1	N9302785
20 mL Headspace Screw Top Vials*	100	5	N9306075
18 mm PTFE/Butyl Assembled Cap and Septa*	100	1	N9306076
18 mm PTFE/Silicone Assembled Cap and Septa*	100	1	N9306077

**Not compatible with TurboMatrix HS 110 headspace sampler.*

HEADSPACE MINI STARTER KIT

The same great consumables as the Headspace Starter Kit (N6710195) without the “Static Headspace Gas Chromatography Theory and Practice” book, and with fewer vials – 200 total (100 each crimp and screw top vials).

Description	Pkg	Qty	Part No.
HEADSPACE MINI STARTER KIT			N6710197
20 mL Headspace Crimp Vials	100	1	N9306079
20 mm PTFE/Butyl Septa/Cap/Springs	100	1	B0104239
20 mm PTFE/Silicone Septa/Cap/Springs	100	1	B0104241
20 mm Aluminum Silicone Septa/Cap/Springs	100	1	B0104243
O-Rings	10	1	B0198110
Needle Seal Assemblies	1	2	B0500833
Pressure Gauge with Needle for Vials	1	1	B0501377
20 mm Hand Crimper	1	1	N9302785
20 mL Headspace Screw Top Vials*	100	1	N9306075
18 mm PTFE/Butyl Assembled Cap and Septa*	100	1	N9306076
18 mm PTFE/Silicone Assembled Cap and Septa*	100	1	N9306077

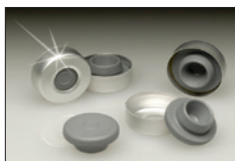
Description	Pkg	Qty	Part No.
HEADSPACE KIT 1000			N6710198
20 mL Headspace Clear Crimp Glass Vial	1000	1	B0104236
20 mm PTFE/Silicone Septa/Cap/Spring	100	10	B0104241
Ergonomic Crimper Manual 20 mm	1	1	N6621037

Headspace Convenience Kits

Description	Pkg	Qty	Part No.
20 mL Butyl HS Convenience Kit		1	N9303990
20 mm Red Butyl Pre-assembly Cap*	100	1	N1010070
20 mL Crimp Clear Vial Kit with Write-On Patch	100	1	N9303349
20 mL PTFE/Butyl HS Convenience Kit		1	N9303991
20 mm Red PTFE/Butyl Pre-assembly Cap*	100	1	B4000025
20 mL Crimp Clear Vial Kit with Write-On Patch	100	1	N9303349
20 mL PTFE/Silicone Convenience Kit		1	N9303992
20 mm PTFE/Silicone Pre-assembly Cap*	100	1	B4000022
20 mL Crimp Clear Vial Kit with Write-On Patch	100	1	N9303349
20 mL Al/Silicone Convenience Kit		1	N9303993
20 mm Aluminum/Silicone Pre-assembly Cap*	100	1	B4000028
20 mL Crimp Clear Vial Kit with Write-On Patch	100	1	N9303349

* Pack of 1000 when sold separately.

HEADSPACE KITS



Description	Pkg	Qty	Part No.
Butyl Rubber Stoppers with Caps	1000	1	B0110728
Butyl Rubber Stopper	100	10	B0038137
Knurled Caps	100	10	B0099814
PTFE/Silicone Injector Septa	12	1	00091357
Injection-Septa	12	1	00092388
Pharma Fix Cap and Septa			
20 mm Aluminum Crimp Seal Lined with Gray Butyl Septa and PTFE Ring Assembled	1000	1	N9306224
Butyl Rubber Stoppers with Ridged Crimp Cap			
20 mm Aluminum Ridged Center Hole Crimp Seal with Gray Butyl Stopper Septa	1000	1	N9303350

NEW! Headspace Convenience Kits

20 mL Glass, OD 22.6 mm x H 75.5 mm Flat Bottom Vials*



Description	Qty	Packs	Part No.
Kit – Headspace 22.6 mm PTFE/Sil Low Bleed 1000	1		N9300901
20 mL X 22.6 mm x 75 Headspace Vial with Write-On Patch and Flat Bottom	1000*	1	N9303352
20 mm Extreme Low Bleed 20 mm PTFE/Natural Crimp Septa Skived PTFE 0.005"/Natural Silicone 0.125"	1000	1	N9302976
Kit – Headspace Ultra Low Bleed/Sil 1000	1		N9300902
20 mL x 22.6 mm Headspace Vial with Write on Patch and Flat Bottom	1000*	1	N9303352
20 mm Ultra Low Bleed Headspace Cap Non-Pressure Relief Skived PTFE 0.005"/White Silicone 0.125"	1000	1	N9302977
Kit – Headspace 22.6 mm Pres Ultra Low Bleed PTFE/Sil 1000	1		N9300903
20 mL x 22.6 mm Headspace Vial with Write on Patch and Flat Bottom	1000*	1	N9203352
20 mm Ultra Low Bleed Headspace Cap 20 mm Crimp Pressure Relief Headspace Cap Skived PTFE 0.005" Silicone 0.125"	1000	1	N9302975

*Vials for Non-PerkinElmer Headspace Instruments

Crimping Tools

Whatever your need may be, PerkinElmer offers a wide range of crimping tools for your convenience. Our universal voltage, precision control, power crimpers with adjustable settings are designed to deliver hundreds of crimps on a single battery charge.

Description	Pkg	Part No.
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Hand Held and Bench-top Crimpers

8 mm Hand Crimper	1	N9306127
11 mm Hand Crimper	1	00090699
11 mm Hand Decapper	1	N9301390
20 mm Hand Crimper	1	N9302785
20 mm Hand Decapper	1	N9301270
Bench-top Vial Crimper	1	N6621006
11 mm Crimper Jaws	1	N6621008
20 mm Crimper Jaws	1	N6621009



Electronic Crimpers

20 mm Electronic Universal Crimper with Global Mains Plug Pack	1	N9304501
20 mm Electronic Universal Decapper with Global Mains Plug Pack	1	N9304503
11 mm Electronic Universal Crimper with Global Mains Plug Pack	1	N9304500
11 mm Electronic Universal Decapper with Global Mains Plug Pack	1	N9304502
Rechargeable Battery 6.4 Volt Lithium Ion	1	N9304504

Ergonomic Hand Crimper



Description	Part No.
11 mm Ergonomic Hand Crimper	N6621035
11 mm Ergonomic Hand Decapper	N6621036
20 mm Ergonomic Hand Crimper	N6621037
20 mm Ergonomic Hand Decapper	N6621038

PerkinElmer – The Clear Choice in Chromatography Consumables

- Genuine PerkinElmer consumables products
- 100% Tested and Approved
- Guaranteed compatibility

Swafer

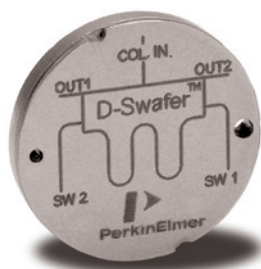
Micro-Channel Wafer Technology – PerkinElmer's Swafer™ micro-channel wafer technology is an innovative and user-friendly approach for flow-switching and splitting applications – it delivers unparalleled hardware and application flexibility, expanding the capabilities of capillary gas chromatography (GC).

This exciting new technology can benefit most analytical laboratories. From simple techniques such as connecting two detectors to one column, and removing unwanted material from a column, to sophisticated multidimensional separations on complex samples, Swafer's capabilities cover a wide range.

Many applications will benefit from the use of the Swafer, including the detection of pesticides in food products and the analysis of complex matrices (e.g. petroleum or natural products).

See what the Swafer can do for you.

www.perkinelmer.com/swafer



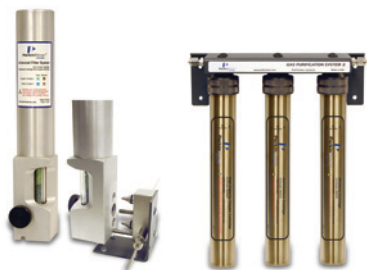
Elite Capillary Columns

We use only the finest quality of high-strength fused-silica in the manufacture of our columns. Each column is individually inspected and tested to guarantee you the highest performance and to maximize reproducibility. PerkinElmer offers you one of the widest selections of capillary columns available.



GC Filtration Systems

Protect your instrument and capillary column and technical results with the correct high-quality gas filtration system. PerkinElmer has a wide assortment of filters that remove moisture, oils, dust, hydrocarbons, oxygen, sulfur compounds and more.



Autosampler Syringes

Syringes from PerkinElmer are individually inspected for accuracy and performance.

Recommended autosampler syringes are available in 0.5, 5 and 50 µL capacities. For routine analyses, the metal plunger in barrel with PTFE-tipped seal is the standard syringe as shipped with each Clarus® GC instrument. Alternative syringes to use are the metal plunger in barrel or the 0.53 mm on-column injection.



GC and GC/MS Organic Standards

PerkinElmer offers standard solutions to meet your environmental analysis requirements.

Each solution is supplied with a comprehensive Certificate of Analysis which documents the analyte concentrations to ensure the highest level of quality. Certified Organic Reference Materials from PerkinElmer are a new addition to an extensive product line, designed to enhance your one-stop shopping experience.



For additional products, call your local representative or visit www.perkinelmer.com/gcsupplies.

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