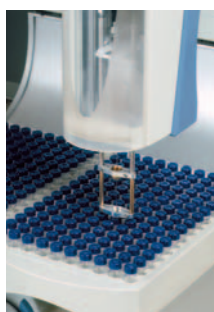


Thermo Electron Corporation offers a variety of vials in a variety of styles and materials to meet most of your GC and HPLC needs.

## GC and HPLC Sample Vials

Compatible with a wide range of instruments and conditions



Thermo's broad range of GC and HPLC vials offers many different options for your separations. Whether you need clear or amber glass, crimp or screw tops, Thermo has vials to fit most of your HPLC or GC sampling needs. All vials are tested on Thermo instruments, but are also compatible with other manufacturer's instruments. Thermo vials are available in convenient combination packs and as stand-alone vials, caps and seals.

- Compatible with a wide range of Thermo HPLC and GC Instruments
- Convenient clam shell packs including 100 vials and caps
- Vials and caps also available separately
- Meet standards set by governing bodies
- High quality glass

While these consumables may seem a small part of a GC or HPLC analysis, the wrong choice of vials and seals can lead to inconsistent and unreliable results. When choosing the appropriate vials and seals, consideration should be given to the analyte, mobile phase and detection method to be used as these could impact your choice of vial and seal materials.



## Seals Selection



### PTFE

PTFE seals are chemically resistant and easily penetrated by syringe needles. Because PTFE seals are not resealable upon puncturing, they are only recommended for single injection applications.

### PTFE/Silicone

High quality, pure silicone laminated to PTFE has excellent resealing qualities, making it the choice for multiple injection applications. PTFE/silicone seals resist coring and are recommended when multiple injections are required. PTFE/silicone seals are the preferred seals for use in liquid chromatography applications.

### Chlorobutyl/PTFE

Chlorobutyl/PTFE seals are an economical choice for low temperature (< 125 °C) or low pressure applications. They are not suitable for alkanes, benzene, chlorinated solvents or cyclohexane when there is no protective PTFE barrier with the chlorobutyl.

## Vial Selection

### Type 1, 33 Expansion Borosilicate Glass

This glass is chemically inert and meets the international standards for hydrolytic extraction:

- BS ISO 3585, DIN 12217 borosilicate glass
- ASTM E-438 Type 1 class A borosilicate glass
- US Pharmacopoeia Type 1 borosilicate glass
- European Pharmacopoeia Type 1 glass

It has a linear coefficient of expansion of approximately  $33 \times 10^{-7} / ^\circ\text{C}$ .

### Type 1, 55 Expansion Borosilicate Glass

This glass is more alkaline than 33 expansion glass and is amber in color, making ideal for a number of laboratory applications. Type 1, 55 expansion glass may be used to handle the exposure of samples to incident UV-Vis light when clear glass is not suitable. The glass meets the international standards for hydrolytic extraction:

- BS ISO 3585, DIN 12217 borosilicate glass
- ASTM E-438 Type 1 class A borosilicate glass
- US Pharmacopoeia Type 1 borosilicate glass
- European Pharmacopoeia Type 1 glass

It has a linear coefficient of expansion of approximately  $55 \times 10^{-7} / ^\circ\text{C}$ .



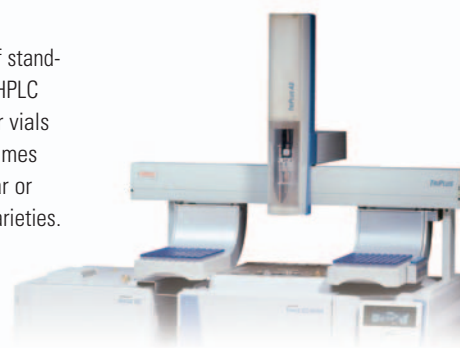
## Vial Combination Packs

These convenient sets containing vials, caps and seals are supplied in commonly used vials sizes for AI/AS3000, AS800/AS2000, SpectraSYSTEM™ and Surveyor™/Surveyor Plus instruments. Vials are made of clear borosilicate glass 33. The accompanying silicon/PTFE seals allow for multiple injections and are good for sample storage.



## Autosampler Vials

Thermo supplies an extensive range of stand-alone vials, caps and seals for most HPLC and GC instruments. The autosampler vials come in sizes that accommodate volumes from 300 µL to 20 mL, as well as clear or amber glass and crimp or screw top varieties.



## Ordering Information

### Caps and Seals

Description	Quantity	Part Number
Aluminum crimp cap with silicone/PTFE seal	100	60180-511
Aluminum crimp cap with chlorobutyl/PTFE seal	100	60180-513
Plastic screw caps, 8 mm	100	60180-514
8 mm seal, red PTFE/white silicone for -562 (compatible with SpectraSYSTEM and Surveyor/Surveyor Plus)	100	60180-562
8 mm seal, blue silicone/PTFE	500	60180-515
Screw top caps for 2 mL, 4 mL and 300 mL vials complete with seals	100	60180-516
Plastic spacer for 2 mL screw top vials (compatible with AS800/AS2000)	100	60180-523
Plastic reducer for 1 and 1.2 mL vials (compatible with TriPlus™ AS)	10	60180-524
Aluminum caps, 8 mm with Teflon faced seals	100	60180-525
Aluminum crimp cap, 11 mm with Teflon faced seals	100	60180-526
9 mm magnetic cover and screw cap, prefitted with a soft silicone/PTFE seal	100	60180-517
Blank cap, tin plate, magnetic (not compatible with Thermo instruments)	100	60180-518
Composite blue magnetic cap, for 20 mm crimp top vials (not compatible with Thermo instruments)	100	60180-519
Composite blue magnetic cap with blue chlorobutyl/PTFE seal, for 20 mm crimp top vials (not compatible with Thermo instruments)	100	60180-520
Blue silicone/PTFE seal, for 20 mm crimp top vials	100	60180-521
Red silicone/PTFE seal, for 20 mm crimp top vials	100	60180-522














Packs of 1000 caps and seals are available at a special price. Other vials and caps are also available. Please call customer service for more information.

## Ordering Information

### Vial Combination Packs

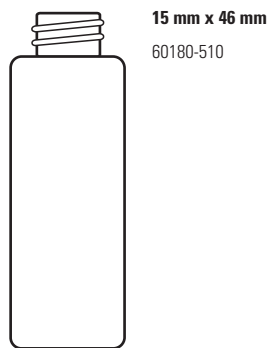
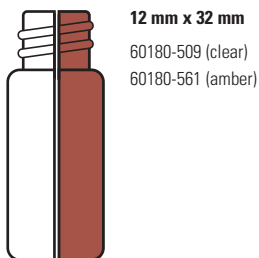
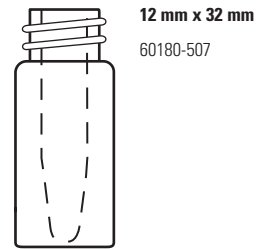
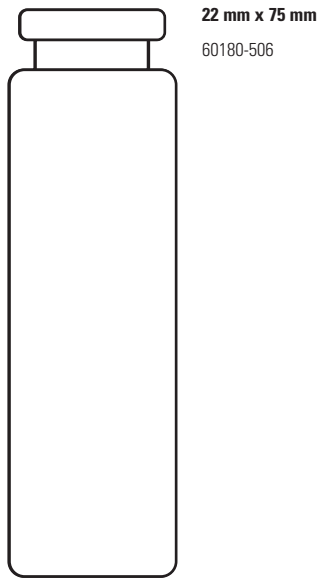
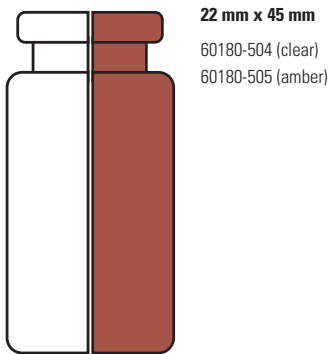
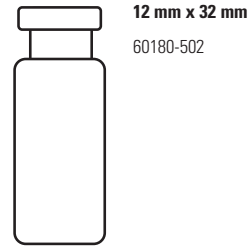
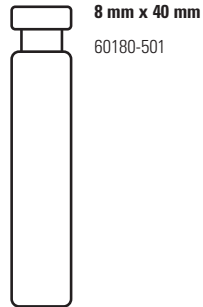
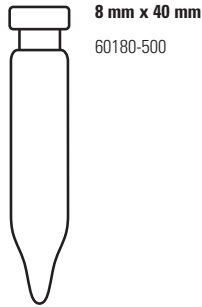
Cap Type	Vial Type	Dimensions (mm x mm)	Instrument Compatibility	Quantity	Part Number
Blue cap with blue silicone/ red PTFE seal	2.0 mL crimp top vial, clear borosilicate glass 33	12 x 32	AS800/AS2000	100	60180-597
			TriPlus AS	1000	60180-593
Cap with white silicone/ red PTFE seal	2.0 mL crimp top vial, clear borosilicate glass 33	12 x 32	SpectraSYSTEM	100	60180-598
			Surveyor/Surveyor Plus	1000	60180-594
9 mm screw cap (blue) prefitted silicone/PTFE seal	2.0 mL screw top vial, clear borosilicate glass 33	12 x 32	AI/AS3000	100	60180-599
			TriPlus AS	1000	60180-595
8 mm screw cap (black) with silicone/PTFE seal	2.0 mL screw top vial, clear borosilicate glass 33	12 x 32	SpectraSYSTEM	100	60180-600
			Surveyor/Surveyor Plus	1000	60180-596

### Autosampler Vials

Description		Dimensions (mm x mm)	Instrument Compatibility	Quantity*	Part Number
Crimp top vial, 1 mL, 8 mm finish Requires 8 mm aluminum caps and seals (60180-525) and plastic reducer (60180-524)		8 x 40	AS800/AS2000 TriPlus AS	125	60180-500
Crimp top vial, 1.2 mL, 8 mm finish Requires 8 mm aluminum caps and seals (60180-525) and plastic reducer (60180-524)		8 x 40	AS800/AS2000 TriPlus AS	125	60180-501
Crimp top vial, 2 mL, 11 mm finish Requires 11 mm aluminum caps and seals (60180-526) and spacers (60180-523)**		12 x 32	AS800/AS2000 AI/AS3000 TriPlus AS Surveyor/Surveyor Plus	100	60180-502
Crimp top vial, 2.5 mL, 11 mm finish. Requires 11 mm aluminum Caps and Seals (60180-526) and Spacers (60180-523)**		12 x 32	AS800/AS2000 TriPlus AS	100	60180-503
Crimp top vial, 10 mL, 20 mm finish Requires 20 mm aluminum caps and seals (60180-513 or 60180-511)		22 x 45	AS800/AS2000 HS800 HS850/HS2000 TriPlus HS TriPlus AS	125	60180-504
Crimp top amber vial, 10 mL, 20 mm finish Requires 20 mm aluminum caps and seals (60180-513 or 60180-511)		22 x 45	AS800/AS2000 HS800 HS850/HS2000 TriPlus HS TriPlus AS	125	60180-505
Crimp top vial, 20 mL, 20 mm finish Requires 20 mm aluminum caps and seals (60180-513 or 60180-511)		22 x 75	HS800 HS850/HS2000 TriPlus HS	125	60180-506
300 µL micro-volume sampling vial Requires screw top cap with seals (60180-516)		12 x 32	AI/AS3000 Surveyor/Surveyor Plus	100	60180-507
Screw top vial, 2 mL, 8 mm finish, clear glass Requires 8 mm plastic screw caps (60180-514), Teflon faced seals (60180-515) and plastic spacers (60180-523)**		12 x 32	AS800/AS2000 TriPlus AS SpectraSYSTEM Surveyor/Surveyor Plus	100	60180-508
Screw top vial, 2 mL, clear glass Requires screw top cap with seals (60180-516)		12 x 32	AI/AS3000 TriPlus AS SpectraSYSTEM Surveyor/Surveyor Plus	100	60180-509
Solvent vial, 4 mL Requires screw top cap with seals (60180-516)		15 x 46	AI/AS3000	125	60180-510
Screw top vial, 2 mL, 8 mm finish, amber glass Requires 8 mm plastic screw caps (60180-514), Teflon faced seals (60180-515) and plastic spacers (60180-523)**		12 x 32	AS800/AS2000,6,7,8 TriPlus AS SpectraSYSTEM Surveyor/Surveyor Plus	100	60180-560
Screw top vial, 2 mL, amber glass Requires screw top cap with seals (60180-516)		12 x 32	AI/AS3000 TriPlus AS SpectraSYSTEM Surveyor/Surveyor Plus	100	60180-561

\*Also available in packs of 1000 at a special price. \*\*Spacers needed only with the AS800/AS2000.

## Size Comparison Chart (Vials Shown at Actual Size)



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