

Sample handling

## SureSTART collection

Streamlined choice. Trusted quality

## Introduction

Streamlined choice. Trusted quality SureSTART vials, caps, inserts, well plates, mats and accessories

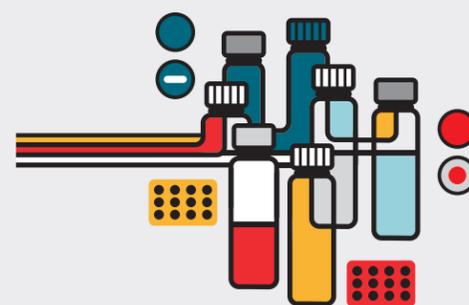
### Excellence from start to finish

The Thermo Scientific™ SureSTART™ sample handling collection includes a range of sample storage and analytical vials and well plates previously sold under Thermo Scientific™ National Scientific™, Thermo Scientific™ Chromacol™ and Thermo Scientific™ Sun-SRI™ product names.

All these products are absorbed into one collection so we can deliver a first-class product experience to our customers from the moment you start your purchasing journey, to provide you with performance, instrument compatibility, affordability and delivery that you need.

We understand that not every experiment or analyte is the same, and that you need products that can meet your performance and pricing requirements. You can find three different waves on each of our glass vials—and a write-on patch that comes as standard. Making it easier for analysts to select the right product and have it labelled correctly right from the start.

With the SureSTART collection, we ensure that no HPLC/UHPLC or GC system gets left behind. Our vials and well plates are suitable for standard instruments from all vendors, streamlining and simplifying your stockroom—and your budget.



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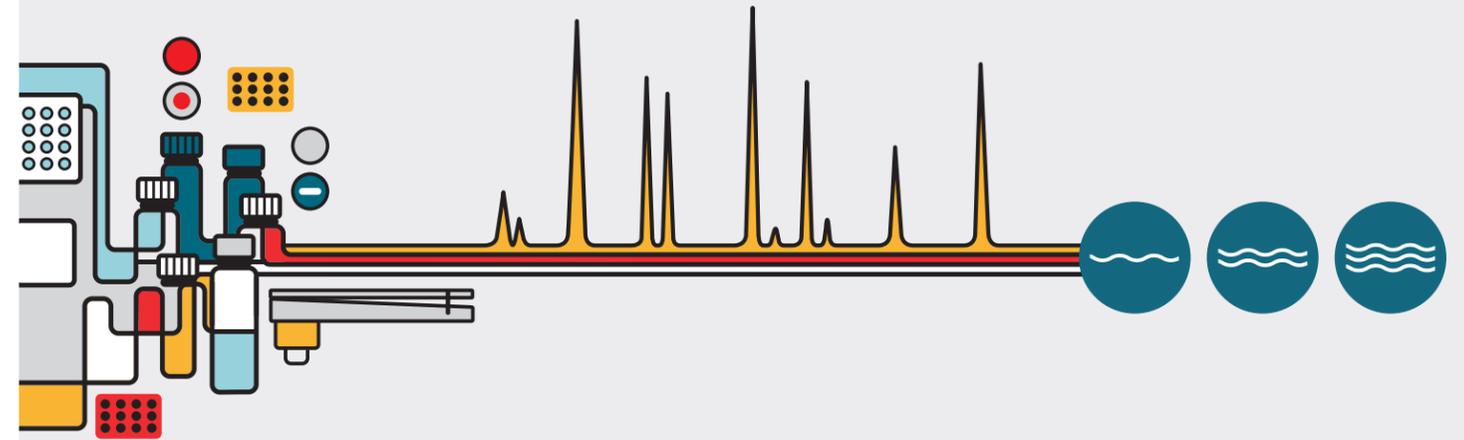
# Why Thermo Scientific SureSTART collection?

Five main benefits to you		More ways to master your testing
	<b>Assured quality and performance</b>	Need the highest standards of quality and performance? Our SureSTART collection has you covered with the most stringent standards in the marketplace—ensuring that you can meet every regulatory requirement.
	<b>Instrument compatibility</b>	Our collection contains a broad selection of products to provide complete compatibility for add-on and integrated chromatography autosamplers.
	<b>Sample security and low compound adsorption</b>	Protect your samples from being affected by pH shifting, adducting or contamination, and prevent analyte loss from either the cap top or analyte adsorption to the glass surface.
	<b>Better product experience</b>	Our SureSTART collection is segmented into three different performance levels, with visual waves on each glass vial to ensure you always select the right product for your experiment, every time. 
	<b>Power to extend your consumables budget</b>	We offer several ways to realize extra value and extend your budget, including built-in bulk discounts—the more you buy, the more you save.



# SureSTART performance levels

## Greater choice for what matters most



We are committed to providing a broad selection of solutions for all your chromatography and sample storage requirements.

Our vials and autosampler well plates are consistently manufactured with the lowest levels of extractables and leachables. They are also made from glass that has the lowest compound adsorption, and plastic that is tested and approved for analytical use.

We have the highest level of standards and certification available in the marketplace so that you can obtain highly reproducible data.

Whether you have routine samples, or you need to ensure the highest level of confidence and compliance, our market-leading collection of storage and autosampler vials, well plates and sample handling accessories has everything you will need

One collection. Three performance levels. All from one trusted source.

Analytical performance requirements

Products	Detector type	Comments
 Thermo Scientific™ SureSTART™ Performance level 1 products	Non-MS	Suitable for QA/QC applications using core detectors, e.g., UV/Vis, PDA, RI, ELSD, FLD, FID, NPD, ECD, TCD, or FPD. Compound concentrations are at easily detectable levels.
 Thermo Scientific™ SureSTART™ Performance level 2 products	MS	Suitable for routine QA/QC applications using MS technology. Compound concentrations are at easily detectable or low levels of detection.
 Thermo Scientific™ SureSTART™ Performance level 3 products	MS	Suitable for challenging applications, and research-focused applications, using MS technology. Compound concentrations are at/near the method detection limit.



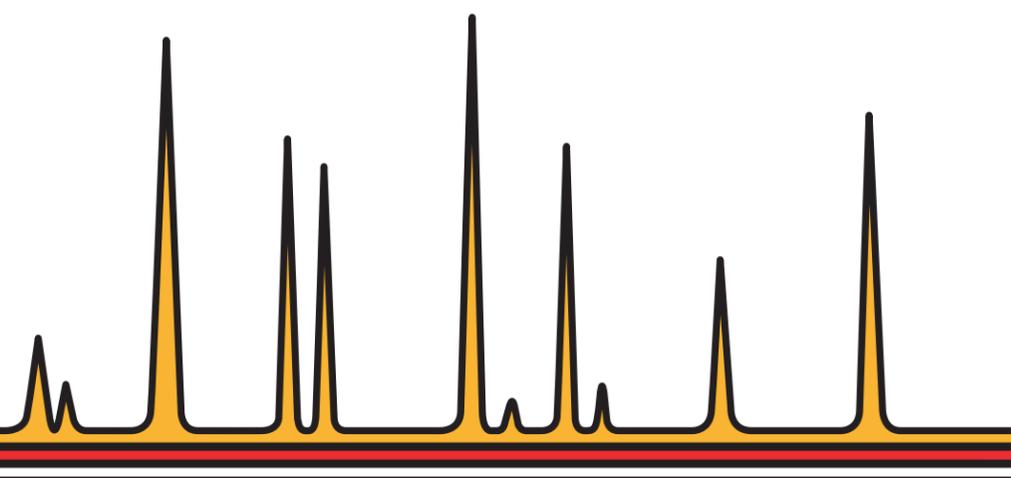
**Performance level 1**  
Everyday analysis:  
Chromatography approved



**Performance level 2**  
High throughput:  
Robust and reproducible



**Performance level 3**  
High performance:  
Selective and sensitive



# Selection guide for vials and well plates

## Which SureSTART product/performance level is right for you?

There are several factors to consider when choosing a vial or well plate for your application. This section will help guide you through this process to determine which combination is most suitable for your application requirements



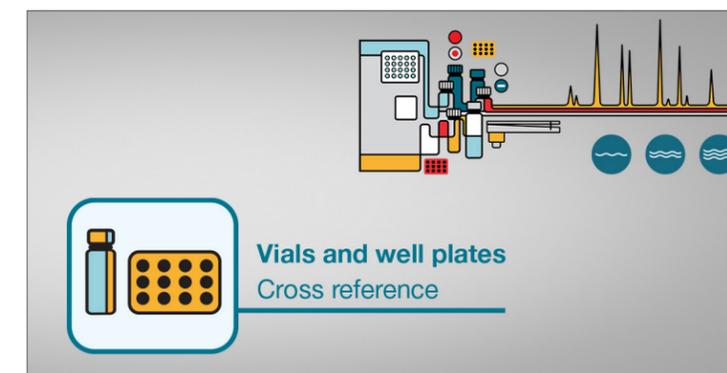
### Need a quick answer?

Why not use our online product selector guide that includes our entire SureSTART Collection of vials, caps, well plates and mats.



### Already purchasing a product?

Let our cross-reference tool find the equivalent SureSTART product/catalog number for you.



# Choosing your vials and inserts

The chart below provides a quick guide to selecting the right vial/insert and material for your experimental and application requirements

Performance			Sample volume		
Non-MS Compound levels not challenging	MS Compound levels at relatively low levels	MS Compound levels near method detection limit or for research analysis	Not sample limited	Volumes vary	Limited
↓	↓	↓	↓	↓	↓
<b>SureSTART Performance level 1</b> General purpose: chromatography approved	<b>SureSTART Performance level 2 high-throughput: for applications requiring robust and reproducible results</b> High-throughput: for applications requiring robust and reproducible results	<b>SureSTART Performance level 3</b> High performance: for applications requiring high selectivity and sensitivity	2 mL vial SureSTART Performance level 1, 2 and 3	High recovery vial Total recovery vial SureSTART Performance level 3	Polyspring insert (self-aligning) Pulled insert (economical choice) Fused insert vial 2 mL vial with separate inserts SureSTART Performance level 2 and 3

Compound polarity			Compound volatility		Compound stability	
Non-polar Mid-polar	Polar	Highly polar	Volatile	Non-volatile	Light-stable	Light-sensitive
↓	↓	↓	↓	↓	↓	↓
<b>Glass vials</b> SureSTART Performance level 1, 2 and 3	<b>*GOLD-grade glass</b> SureSTART Performance level 3	<b>*Silanised glass vials</b> <b>**Polypropylene (PP) vials</b> <b>GOLD-grade glass vials and inserts</b> When low levels of inorganic are required and for solvent stability SureSTART Performance level 1 (PP), 2 and 3 (silanised)	Crimp top vial *SureStop vial Screw thread vial Headspace vials	Screw thread vial Snap-It vial Crimp top vial	Clear vials	Amber vials

\*These products can be found in SureSTART Performance level 3  
 \*\*Not recommended for GC applications

# Choosing your septa

The chart below provides a quick guide to selecting the right septa material type for your experimental and application requirements.

Multiple injection?	Temperature?			Thin, fragile needle?	Blunt, thick needle?	Critical analysis?	Low coring?
Good resealability required	-40°C to 120 °C	-40°C to 110 °C	-60°C to 200 °C	Soft and thin septa required	Pre-slit/pre-cut liner as penetration aid (HPLC)	Very clean liner required/ low-extractables	Double-sided PTFE laminated liners required
↓	↓	↓	↓	↓	↓	↓	↓
Silicone/PTFE Natural rubber/ TEF	Natural rubber/ TEF Butyl/PTFE	Red Rubber/ PTFE	Silicone/PTFE	Silicone/PTFE	Silicone/PTFE, pre-slit	Silicone/PTFE	PTFE/silicone/ PTFE

# Choosing your well plates and mats

Selecting the perfect Thermo Scientific WebSeal well plates and mats for your chromatography requirements is easy using our selector tools and resources.

Performance requirements			Compound polarity		Sample availability		
Compound levels not challenging	Compound levels not challenging/relatively low levels	Compound levels at/near method detection limit	Water and polar	Hydrophobic (e.g., proteins and peptides)	Unlimited	Limited	Very limited
↓	↓	↓	↓	↓	↓	↓	↓
<b>WebSeal</b> Plastic, chromatography tested	<b>WebSeal certified products</b> Plastic, MS tested	<b>WebSeal Plate+</b> Glass-coated plates <b>Plate with glass inserts</b>	<b>WebSeal plastic and certified</b>	<b>WebSeal Plate+</b> Glass-coated plates <b>Plate with glass inserts</b>	<b>Flat bottom</b> Where sample volume is high	<b>U-Bottom</b> Where sample volume is low	<b>V-Bottom</b> Where sample volume is very low

Microtitre: 14-16 mm (also referred to as microwell and standard well plate)  
Mid well plate: 20-41 mm  
Deep well plate: >44 mm

Autosampler compatibility					
Agilent	CTC (PAL)	Thermo Scientific™ TriPlus RSH*	Shimadzu	Thermo Scientific™ Vanquish™***	Waters ACQUITY
↓	↓	↓	↓	↓	↓
Microtitre plate Mid well plate Deep well plate					Mid well plate

\*TriPlus RSH with 6-drawer stack can accommodate 24 microtitre 15.5 mm plates microtitre well plate  
\*\*Barcoded plates for complete orientation



Examples of microtitre, mid well and deep well plates shown above

# Certified integrity and consistency

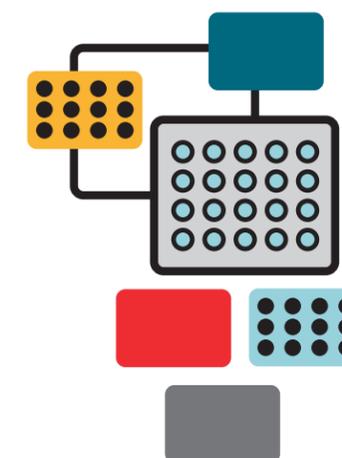


With over 40 years of experience supplying vial and well plates, Thermo Scientific SureSTART certified products are supplied to meet 'critical to quality' specifications, consistently. SureSTART products are produced in compliance with ISO 9001 requirements.

In addition, SureSTART certified products include:

- Glass vials made from First Hydrolytic Type 1 A borosilicate glass, which conforms to US FDA, USP, and EU Pharmacopeia standards
- Chemically and thermally resistant well plates are made of the highest quality materials.
- Our autosampler WebSeal well-plates all conform to ANSI SLAS 4-2004 standards.
- In-line opto-electronic testing inspects 100% of all key dimensions

- Our well plates are chromatography tested for solvent compatibility and inertness to ensure your data quality is not compromised
- Packaged in material that has been tested and selected for cleanliness
- Subjected to rigorous end-of-line sampling and quality control procedures to ensure all vials remain within specification
- Most glass vials come with a non-removable write-on patch convenience and ease-of-use
- Patented products, such as AVCS caps designed to minimize sample evaporation
- Products produced and/or packed in a clean environment to reduce contamination
- Glass vials which are available deactivated/silanized



# Performance level 1: Everyday analysis



## Chromatography approved

### Meet your chromatographic needs

Choose the right vial for chromatographic analyses. Thermo Scientific™ SureSTART™ Performance level 1 products are designed for everyday chromatography analysis. They provide an affordable choice for use with all GC and HPLC/UHPLC instrument types.

If you are verifying compound presence and quantification using detection techniques such as UV/Vis, PDA, RI, ELSD, FLD, FID, NPD, ECD, TCD, or FPD, our Performance level 1 products are the perfect solution for you– select the products with the one wave.

Within Performance level 1 you will find a selection of vials (glass, plastic, <2 mL, 2 mL and headspace).

You can also find a great selection of standard and bonded caps to support robotic autosamplers within this performance level.

Need stoppers? These can also be found within this performance level.

Vials	Caps
<2 mL polypropylene screw microvials	9 mm screw caps
2 mL glass screw vials	
2 mL glass crimp vials	11 mm crimp caps
<2 mL polypropylene snap microvials	11 mm snap caps
Plastic inserts	—
20 mL glass crimp headspace vials	20 mm crimp caps
20 mm stopper	—
Specification certified kits	—
Storage	—

### Performance level 1 for everyday analyses

- Packaged in material that has been tested and selected for cleanliness
- All products within this performance level are suitable for use with GC and HPLC/UHPLC
- Headspace vials and caps available in 20 mL options
- Vials are identified by one wave and a convenient write-on patch as standard
- Vials and caps available as screw, snap and crimp
- Vials available as clear or amber glass and as either glass or plastic
- Vial volume sizes ranging from 0.3 mL to 20 mL covering limited sample volumes to headspace analyses
- Caps come in a choice of polypropylene, aluminium and magnetic steel caps with silicone/PTFE, rubber/TEF, or butyl/PTFE septa
- Use Thermo Scientific™ manual or electronic crimpers and decrimpers for easy application and removal of crimp caps
- Buy vials and caps in bulk for greater savings

### Specification certified

- All Thermo Scientific SureSTART vials are dimensionally verified to ensure autosampler compatibility
- Automated optical and gauge inspection to ensure critical dimensions and tolerances
- Vials meet all relevant requirements of US, EU, JPN Pharmacopia
- Uniform and defect-free

### Lot traceable

- 100% traceable through the manufacturing process
- Certificate of Conformance available by lot number upon request



## Screw vials and associated caps (<2 mL – 2 mL vials, 9 mm caps)

### <2 mL polypropylene screw microvials

#### Performance Level 1 for everyday analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height)
- No marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear plastic	Clear plastic
Total volume	0.4 mL	1.5 mL
Usable volume	0.3 mL	1 mL
Residual volume	4 µL	170 µL
<b>Ordering information</b>		
100/pack	03452259	03452260
10 x 100/pack	03452261	03452262
50 x 100/pack	03452263	03452264



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 2 mL glass screw vials

Performance Level 1 for everyday analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass	Amber glass
Total volume	2 mL	
Usable volume	1.5 mL	
Residual volume	170 µL	
<b>Ordering information</b>		
100/pack	03251829	03251830
10 x 100/pack	03452231	03452232
50 x 100/pack	03452233	03452234



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

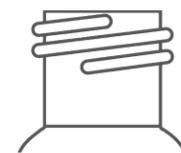
### 9 mm screw caps

Performance Level 1 for everyday analysis

#### Comments

- Short thread screw
- 9 mm
- Specification certified

For use with <2 mL and 2 mL screw vials



Cap color and material	–	–	–	–	Bonded	Bonded	Bonded
	–	–	–	Pre-slit septa	–	Pre-slit septa	Pre-slit septa
	Blue polypropylene						
Septum color and material	Red natural rubber/clear TEF	Red silicone/ivory PTFE	White silicone/red PTFE	White silicone/blue PTFE	White silicone/white PTFE	White silicone/white PTFE	White silicone/red PTFE
Septum thickness	1 mm						
Septum hardness	60 shore	45 shore	55 shore	55 shore	45 shore	45 shore	45 shore
<b>Ordering information</b>							
100/pack	03251834	03251835	03251836	03251837	03251838	03251839	03251839
10 x 100/pack	03452286	03452285	03452284	03452287	03452322	03452323	–
50 x 100/pack	03452292	03452291	03452290	03452293	03452328	03452329	–



# Crimp vials and associated caps (2 mL, 11 mm caps)



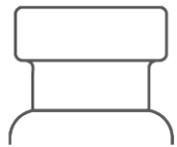
## 2 mL glass crimp vials

Performance Level 1 for everyday analysis

### Comments

- Crimp closure (11 mm)
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 11 mm crimp caps



Vial color and material	Clear glass	Amber glass
Total volume	2 mL	
Usable volume	1.5 mL	
Residual volume	170 µL	
<b>Ordering information</b>		
100/pack	03251826	03251827
10 x 100/pack	03452197	03452198
50 x 100/pack	03452199	03452200



# Crimp vials and associated caps Continued (2 mL, 11 mm caps)

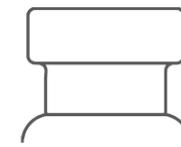
## 11 mm crimp caps

Performance Level 1 for everyday analysis

### Comments

- Crimp closure (11 mm)
- Specification certified

For use with <2 mL and 2 mL crimp vials, or <2 mL and 2 mL snap vials  
Use with 11 mm crimpers and decrimpers



Cap color and material	Silver aluminium	
Septum color and material	Natural rubber/clear TEF	White silicone/red PTFE
Septum thickness	1 mm	1.3 mm
Septum hardness	60 shore	45 shore
<b>Ordering information</b>		
100/pack	3251832	03251833
10 x 100/pack	03452220	03452217
50 x 100/pack	03452221	03452218



# Snap vials and associated caps

(<2 mL vials, 11 mm caps)

## <2 mL polypropylene snap microvials

Performance Level 1 for everyday analysis

### Comments

- Snap (11 mm)
- 12 mm x 32 mm (diameter x height)
- No marking spot
- Specification certified

For use with 11 mm snap caps



Vial color and material	Clear polypropylene		
	Conical	Conical	Flat bottom
Total volume	0.3 mL	0.8 mL	1.0 mL
Usable volume	0.2 mL	0.6 mL	0.8 mL
Residual volume	4 µL	6 µL	80 µL
<b>Ordering information</b>			
100/pack	03452358	03452357	03452356
10 x 100/pack	03452364	03452363	03452362
50 x 100/pack	03452370	03452369	03452368



# Snap vials and associated caps

Continued (<2 mL vials, 11 mm caps)

## 11 mm snap caps

Performance Level 1 for everyday analysis

### Comments

- Snap closure (11 mm)
- Specification certified
- Does not re-seal after puncture

For use with <2 mL and 2 mL snap vials



Cap color and material	Blue polyethylene membrane cap	Clear polyethylene
	Septum color and material	Membrane thickness 0.5 mm
Septum thickness	This cap comes with no septa	
Septum hardness	This cap comes with no septa	
<b>Ordering information</b>		
100/pack	03452581	01549806



## Plastic inserts (2 mL vials)

### Plastic inserts for 2 mL vials

Performance Level 1 for everyday analysis

#### Comments

- 6 mm x 31 mm (diameter x height) (size x height) conical with polyspring base
- No marking spot
- Specification certified

For use with 2 mL screw vials, 2 mL snap vials or 2 mL crimp vials



Insert color and material	Clear glass with clear polypropylene polyspring
Total volume	0.30 mL
Usable volume	0.25 mL
Residual volume	4 µL
<b>Ordering information</b>	
100/pack	03452338
10 x 100/pack	03452340
50 x 100/pack	03452342



## Headspace vials and associated caps (20 mL vials, 20 mm caps)

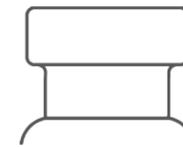
### 20 mL glass crimp headspace vials

Performance Level 1 for everyday analysis

#### Comments

- Crimp
- 22.5 mm x 75.5 mm (diameter x height) square rim, round bottom base
- Marking spot
- Specification certified

For use with 20 mm crimp caps



Vial color and material	Clear glass
Total volume	20 mL
Usable volume	18 mL
Residual volume	0.8 mL
<b>Ordering information</b>	
100/pack	03452424
10 x 100/pack	03452434



# Headspace vials and associated caps Continued

## (20 mL vials, 20 mm caps)

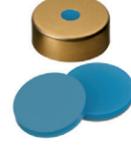
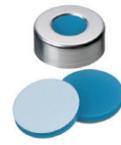
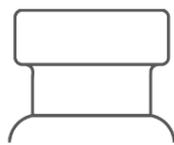
### 20 mm crimp caps

Performance Level 1 for everyday analysis

#### Comments

- Crimp closure (20 mm)
- Specification certified

For use with 10 mL and 20 mL crimp headspace vials (with diameter neck size of 20 mm)  
Use with 20 mm crimpers and decrimpers



Cap color and material	Silver aluminium	Silver aluminium	Silver aluminium	Gold magnetic steel	Gold magnetic steel
Septum color and material	Molded Grey butyl/ grey PTFE	— Blue silicone/ white PTFE	—	Molded Grey butyl/ grey PTFE	— Blue transparent silicone/clear PTFE
Septum thickness	3 mm	3 mm	—	3 mm	3 mm
Septum hardness	50 shore	45 shore	—	50 shore	45 shore
<b>Ordering information</b>					
100/pack	03251840	03251841	—	03251842	03251843
10 x 100/pack	03452460	03452459	01549820	03452473	03452472
50 x 100/pack	03452465	03452464	—	03452477	03452476



# Stoppers

### 20 mm stopper

Performance Level 1 for everyday analysis

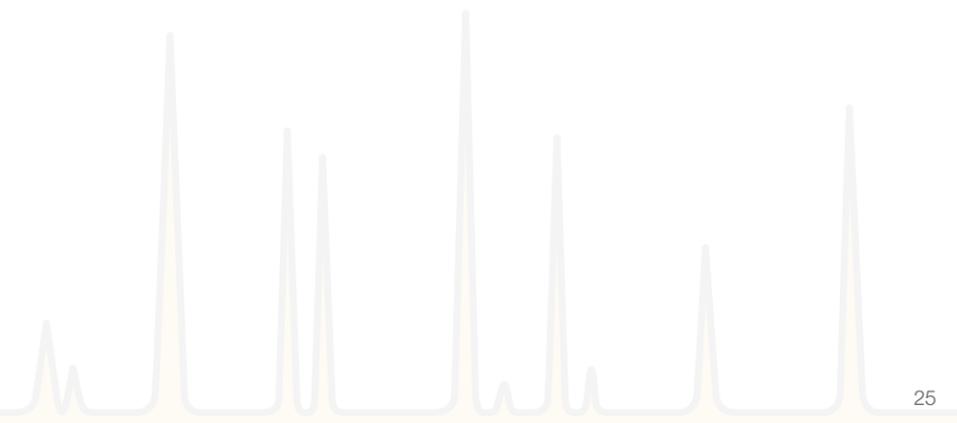
#### Comments

- Specification certified

For use with vials (e.g. 10 mL/20 mL crimp vials) with diameter neck size of 20 mm



Product description	Stopper (20 mm)
Color and material	Grey bromobutyl
Septum thickness	3 mm
Septum hardness	45 shore
<b>Ordering information</b>	
100/pack	03452497
10 x 100/pack	03452500
50 x 100/pack	03452503





## Specification certified kits

### Specification certified shell, screw vial and cap kits

Performance level 1 for everyday analysis

#### Description

- Screw
- 9 mm short thread
- Specification certified



Vial color and material	Clear glass	Clear glass	Clear glass
Vial total volume	0.4 mL	0.4 mL	1.25 mL
Cap color and material	White silicone	Blue propylene	Lamella plug
Septum color and material	Blue PTFE	White silicone/blue PTFE	—
<b>Ordering information</b>			
100/pack	01549828	01549834	—
200/pack	—	—	01549794



## Storage

### Vial rack

Performance level 1 for everyday analysis

#### Description

- For 12 x 32 mm vials
- 50 cavities (5 x 10)
- No lid, reusable 20 x 10.5 x 2.2 cm

Use with 2 mm vials



Product description	Vial rack
Color and material	Blue polypropylene
<b>Ordering information</b>	
1/pack	01549798

# Performance level 2: High-throughput analysis

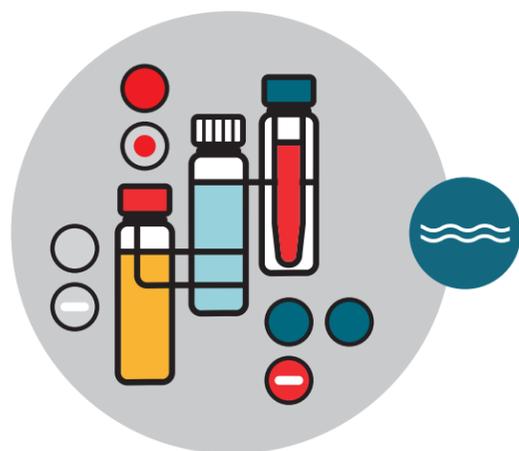
## When robustness and reproducibility are key

### Be compliant-ready for your high-throughput samples in regulated environments

Choose Thermo Scientific™ SureSTART™ Performance level 2 products, to ensure high quality data with an uninterrupted workflow in high throughput applications using GC, HPLC/ UHPLC, single or triple quadrupole MS systems. Use these Level 2 vials for routine QA/QC applications, where the analyte levels are achievable or close to the method detection level. These products have very low metal content and extractables and leachables and conform to high standards so that you can meet your regulatory requirements. They are Specification Certified to ensure their physical dimensions and autosampler compatibility.

If you need products that support routine analyses, our Performance Level 2 products are here for you. Select the products with the two waves.

Within Performance Level 2 you will find a selection of kits (including our range of EPA and Scintillation), vials, caps, inserts, septa and stoppers.



#### Performance level 2 for high-throughput applications

- All products within this performance level are suitable for GC, HPLC/UHPLC, and mass spectrometry (MS) applications
- Volume sizes ranging from 0.3 mL to 20 mL covering limited sample volumes to headspace analyses
- Headspace vials and caps available from 10 mL – 20 mL
- Vials are identified by two waves and a convenient write-on patch as standard
- Vials available as screw, snap and crimp
- Vials available in glass, silanized glass and plastic
- Vials available as clear or amber glass
- Caps available as screw, screw AVCS, snap and crimp
- Use Thermo Scientific manual or electronic crimpers and decrimpers for easy application and removal of crimp caps
- EPA, scintillation and specification certified kits can be found within performance level 2
- Buy vials and caps in bulk for greater savings

#### Specification certified

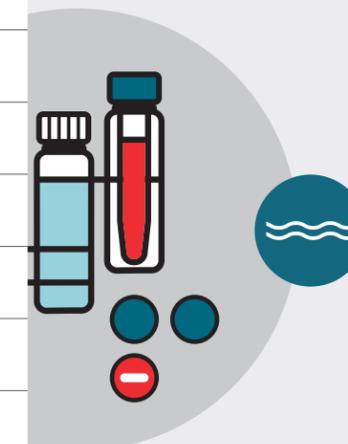
- All Thermo Scientific SureSTART vials are dimensionally verified to ensure autosampler compatibility
- Inspected by automated optical and gauge inspection to ensure critical dimensions and tolerances
- Vials meet all requirements of US, EU, JPN Pharmacopia
- Uniform and defect-free

#### Lot traceable

- 100% traceable through the manufacturing process
- Certificate of Conformance available by lot number upon request

# Performance level 2: High-throughput analysis

Vials	Caps
0.7 mL amber crimp vials	8 mm crimp caps
1.7 mL glass high recovery screw microvials for <2 mL sample	9 mm screw caps
2 mL glass screw vials	11 mm crimp caps
2 mL glass crimp vials	11 mm snap caps 11 mm crimp caps
2 mL glass snap vials	11 mm snap caps 11 mm crimp caps
Inserts for 2 mL vials	—
4 mL glass screw vials	13 mm screw caps
8 mL glass screw vials	15 mm screw caps
10 mL glass screw vials	18 mm screw caps
10 mL glass crimp headspace vials	20 mm crimp caps
12 mL glass vials	15 mm screw caps
20 mL glass screw vials	18 mm screw caps
20 mL glass crimp headspace vials	20 mm crimp caps
20 mm stoppers and septa	20 mm crimp caps
40 mL glass vials	24 mm screw caps
Kits	
Specification certified	
EPA	





## Screw vials and associated caps (<2 mL – 2 mL vials, 8 mm caps)

### 0.7 mL glass crimp microvials for <2 mL samples

Performance level 2 for high-throughput applications

#### Description

- Crimp
- Conical base
- Specification certified

For use with 8 mm crimp caps



Vial color and material	Amber glass
Total volume	0.7 mL
Usable volume	0.45 mL
Residual volume	–
<b>Ordering information</b>	
100/pack 	01549854



## Screw vials and associated caps (<2 mL – 2 mL vials, 9 mm caps)

### 1.7 mL high-recovery glass screw microvials for <2 mL samples

Performance Level 2 for high-throughput applications

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) inner V-bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass
Total volume	1.7 mL
Usable volume	1.3 mL
Residual volume	4 µL
<b>Ordering information</b>	
100/pack 	03452250
10 x 100/pack 	03452254
50 x 100/pack 	03452258



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 2 mL glass screw vials

Performance Level 2 for high-throughput applications

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass	Amber glass	Amber glass, silanized
Total volume		2.0 mL	
Usable volume		1.5 mL	
Residual volume		170 µL	
<b>Ordering information</b>			
100/pack	03452223	03452224	03452266
10 x 100/pack	03452225	03452226	—
50 x 100/pack	03452227	03452228	—



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 9 mm AVCS screw caps

Performance Level 2 for high-throughput applications

#### Comments

- Short thread screw
- 9 mm
- Specification certified
- AVCS screw top technology

For use with <2 mL and 2 mL screw vials



Cap components	—	Bonded	Bonded	—	—	—
	—	Pre-slit	—	—	—	—
Cap color and material	Blue polypropylene			Red polypropylene		
Septum color and material	White silicone/ red PTFE	White silicone/ beige PTFE	White silicone/ beige PTFE	Red rubber/ ivory PTFE	White silicone/ red PTFE	Red rubber/ ivory PTFE (RedRubber)
Septum thickness	1 mm					
Septum hardness	45 shore					
<b>Ordering information</b>						
100/pack	03452276	03452314	03452315	03452277	03452305	03452306
10 x 100/pack	03452282	03452320	03452321	03452283	03452307	03452308
50 x 100/pack	03452288	03452326	03452327	03452289	03452309	03452310



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 9 mm AVCS screw caps

Performance level 2 for high-throughput applications

#### Description

- Short thread screw
- 9 mm
- Specification certified
- AVCS screw top technology

For use with <2 mL and 2 mL screw vials



Cap components	Close top cap	–	–	–	–	–	–
Cap color and material	Blue polypropylene	Black polypropylene	Black polypropylene	Green polypropylene	Green polypropylene	Yellow polypropylene	Yellow polypropylene
Septum color and material	Red rubber/ivory PTFE (RedRubber)	White Silicone/Red PTFE	Red rubber/ivory PTFE (RedRubber)	White Silicone/Red PTFE	Red rubber/ivory PTFE (RedRubber)	White Silicone/Red PTFE	Red rubber/ivory PTFE (RedRubber)
Septum thickness	1 mm						
Septum hardness	45 shore						
Ordering information							
100/pack	01549797	01549811	01549833	01549812	01549819	01549824	01549840



## Crimp vials and associated caps

(2 mL vials, 11 mm caps)

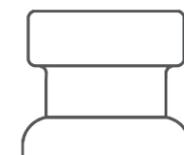
### 2 mL glass crimp vials

Performance Level 2 for high-throughput applications

#### Comments

- Crimp
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 11 mm crimp caps, or 11 mm snap caps



Vial color and material	Clear glass	Amber glass
Total volume	2 mL	
Usable volume	1.7 mL	
Residual volume	170 µL	
Ordering information		
100/pack	03452189	03452190
10 x 100/pack	03452191	03452192
50 x 100/pack	03452193	03452194



## Crimp vials and associated caps Continued

### (2 mL vials, 11 mm caps)

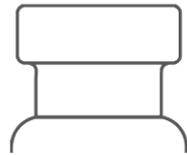
#### 11 mm crimp caps

Performance Level 2 for high-throughput applications

#### Comments

- Crimp closure (11 mm)
- Specification certified

For use with <2 mL - 2 mL crimp vials, or <2 mL - 2 mL snap vials  
Use with 11 mm crimpers and decrimpers



Cap color and material	Silver aluminium closure	
Septum color and material	White silicone/red PTFE	Red rubber/ivory PTFE
Septum thickness	1 mm	
Septum hardness	45 shore	60 shore
<b>Ordering information</b>		
100/pack	03452210	03452213
10 x 100/pack	03452211	03452214
50 x 100/pack	03452212	03452215



## Snap vials and associated caps

### (2 mL vials, 11 mm caps)

#### 2 mL glass snap vials

Performance Level 2 for high-throughput applications

#### Comments

- Snap
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 11 mm snap caps or 11 mm crimp caps



Vial color and material	Clear glass	Amber glass
Total volume	2 mL	
Usable volume	1.7 mL	
Residual volume	170 µL	
<b>Ordering information</b>		
100/pack	03452345	03452346
10 x 100/pack	03452348	03452349
50 x 100/pack	03452351	03452352



# Snap vials and associated caps Continued

## (2 mL vials, 11 mm caps)

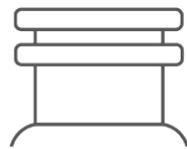
### 11 mm snap caps

Performance Level 2 for high-throughput applications

#### Comments

- Snap closure (11 mm)
- Specification certified

For use with 11 mm glass or plastic snap vials



Cap color and material	Blue polyethylene	Blue polyethylene	Red polyethylene	Red polyethylene
Septum color and material	White silicone/ red PTFE	Natural rubber/ clear TEF	White silicone/ red PTFE	Natural rubber/ clear TEF
Septum thickness	1 mm			
Septum hardness	45 shore	60 shore	55 shore	60 shore
Ordering information				
100/pack	03452378	03452379	03452396	03452397
10 x 100/pack	03452384	03452385	03452399	03452400
50 x 100/pack	03452390	03452391	03452402	03452403



# Snap vials and associated caps Continued

## (2 mL vials, 11 mm caps)

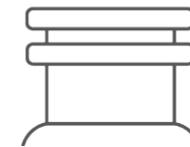
### 11 mm snap caps

Performance level 2 for high-throughput applications

#### Description

- Snap closure (11 mm)
- Specification certified

For use with 11 mm glass or plastic snap vials



Cap color and material	Clear polyethylene	Clear polyethylene	Red polyethylene	Red polyethylene	Orange polyethylene	Clear polyethylene	Blue polyethylene
Septum color and material	Red silicone rubber/ clear PTFE	White silicone/ red PTFE	White silicone/ red PTFE	White silicone/ red PTFE	White silicone/ red PTFE	White virgin PTFE	Red silicone rubber/ clear PTFE
Septum thickness	1 mm						
Septum hardness	45 shore	60 shore	55 shore	60 shore	60 shore	53 shore	60 shore
Ordering information							
100/pack	01549792	01549793	01549799	01549813	—	01549841	01549855
1000/pack	—	—	—	—	01549816	—	—



# Screw vials and associated caps

## (4 mL vials, 13 mm caps)

### 4 mL glass screw vials

Performance Level 2 for high-throughput applications

#### Comments

- Screw
- 15 x 45 mm (diameter x height) flat base
- Specification certified

For use with 13 mm screw caps



Vial color and material	Clear glass	Amber glass
Total volume	4.0 mL	
Usable volume	3.5 mL	
Residual volume	800 µL	
<b>Ordering information</b>		
100/pack	03452577	03452579



# Screw vials and associated caps

## (4 mL vials, 13 mm caps) Continued

### 13 mm screw caps

Performance Level 2 for high-throughput applications

#### Comments

- Short thread screw closure (13 mm/13-425)
- Specification certified

For use with 4 mL screw vials (and other vials with screw 13 mm dimensions)



Cap color and material	—	Pre-slit septa	—
Cap color and material	Black polypropylene	White polypropylene	White polypropylene
Septum color and material	White silicone/red PTFE	White silicone/blue PTFE	White UR 13-425 PE foam/PTFE close top
Septum thickness	1.5 mm		
Septum hardness	55 shore	45 shore	75 shore
<b>Ordering information</b>			
100/pack	03452578	03452580	01549796



## Headspace screw vials and associated caps (10 mL vials, 18 mm caps)

### 10 mL glass screw headspace vials

Performance Level 2 for high-throughput applications

#### Comments

- Screw
- 22.5 mm x 46 mm (diameter x height) round bottom base
- Marking spot
- Specification certified

For use with 18 mm screw caps



Vial color and material	Clear glass	Amber glass
Total volume	10 mL	10 mL
Usable volume	8 mL	8 mL
Residual volume	0.8 mL	0.8 mL
<b>Ordering information</b>		
100/pack 	03452554	03452552
10 x 100/pack 	03452560	03452558
50 x 100/pack 	03452566	03452564



## Headspace screw vials and associated caps Continued (10 mL vials, 20 mm caps)

### 20 mL glass screw headspace vials

Performance Level 2 for high-throughput applications

#### Comments

- Screw
- 22.5 mm x 75 mm (diameter x height) round bottom base
- Marking spot
- Specification certified

For use with 18 mm screw caps



Vial color and material	Clear glass	Amber glass
Total volume	20 mL	20 mL
Usable volume	18 mL	18 mL
Residual volume	0.8 mL	0.8 mL
<b>Ordering information</b>		
100/pack 	03452427	03452428
10 x 100/pack 	03452437	03452438
50 x 100/pack 	03452447	03452448



# Headspace crimp vials and associated caps

(10 mL – 20 mL vials, 20 mm caps)

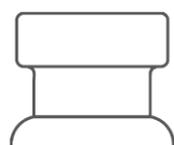
## 10 mL glass crimp headspace vials

Performance Level 2 for high-throughput applications

### Comments

- Crimp
- 22.5 mm x 46 mm (diameter x height) round bottom base with beveled edge rim
- Marking spot
- Specification certified

For use with 20 mm crimp caps



Vial color and material	Clear glass	Amber glass
Total volume	10 mL	
Usable volume	8 mL	
Residual volume	0.8 mL	
<b>Ordering information</b>		
100/pack	03452553	03452551
10 x 100/pack	03452559	03452557
50 x 100/pack	03452565	03452563



# Headspace crimp vials and associated caps Continued

(10 mL – 20 mL vials, 20 mm caps)

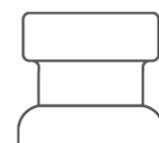
## 20 mL glass crimp headspace vials

Performance Level 2 for high-throughput applications

### Comments

- Crimp
- 65 mm x 75 mm (diameter x height) round bottom base with beveled edge rim (03452422)
- 23 mm x 75.5 mm (diameter x height) round bottom base with beveled edge rim (03452426, 03452423)
- Marking spot
- Specification certified

For use with 20 mm crimp caps



Vial color and material	Clear glass	Clear glass	Amber glass
Vial diameter and length	22.65 x 75.5	23 x 75.5	23 x 75.5
Total volume	20 mL		
Usable volume	18 mL		
Residual volume	0.8 mL		
<b>Ordering information</b>			
100/pack	03452422	03452426	03452423
10 x 100/pack	03452432	03452436	03452433
50 x 100/pack	03452442	03452446	03452443

03452426 and 03452423 fit Perkin-Elmer instruments





## Headspace crimp vials and associated caps Continued

(10 mL – 20 mL vials, 20 mm caps)

### 20 mm crimp caps

Performance Level 2 for high-throughput applications

#### Comments

- Crimp closure (20 mm)
- Specification certified

For use with 10 mL and 20 mL crimp headspace vials (with neck size of 20 mm)

Use with 20 mm crimpers and decrimpers



Cap components	–	–	–	Magnetic	Magnetic
	–	–	Pressure release	–	Suitable for high temperature
	–	–	–	Soft septa	–
Cap color and material	Silver aluminium	Silver aluminium	Silver aluminium	Gold steel	Silver steel
Septum color and material	Black butyl/ grey PTFE; molded Pharmafix	White silicone/ beige PTFE	White silicone/ beige PTFE	Blue silicone/ clear PTFE	Red silicone/ natural PTFE
Septum thickness	3.0 mm	3.2 mm	3.2 mm	3.0 mm	3.0 mm
Septum hardness	50 shore	45 shore	45 shore	40 shore	55 shore

#### Ordering information

100/pack		03452453	03452452	03452466	03452467	03452480
10 x 100/pack		03452458	03452457	03452470	03452471	03452486
50 x 100/pack		03452463	03452462	03452474	03452475	03452492



## Headspace screw vials and associated caps

(20 mL, 18 mm closure)

### Screw vial and cap kits

Performance level 2 for high-throughput applications

#### Description

- Screw thread
- Specification Certified
- 22.5 x 75.5 (diameter x height) headspace round bottom base



Vial color and material	Clear glass
Vial total volume	20 mL
Cap color and material	Silver stainless steel open top screw cap, magnetic
Septum color and material	Blue silicone/clear PFTE, 45 shore hardness
<b>Ordering information</b>	
100/pack	01549826



# Stoppers and septa

## 20 mm stoppers and septa

Performance Level 2 for high-throughput applications

### Comments

- Specification certified

For use with vials (e.g. 10 mL/20 mL crimp vials) with diameter neck size of 20 mm



Product description	Stopper (20 mm)	Septum (20 mm)	Septum (20 mm)
Color and material	Grey bromobutyl	White silicone/beige PTFE	Black Butyl/grey PTFE molded pharmafix
Septum thickness	3.0 mm	3.2 mm	3.0 mm
Septum hardness	45 shore		50 shore
<b>Ordering information</b>			
100/pack	03452496	03452498	6A20CBT3
10 x 100/pack	03452499	03452499	—
50 x 100/pack	03452502	03452502	—



# EPA Vials and Caps

## 8 mL EPA screw vials

Performance level 2 for high-throughput applications

### Description

- Screw (15-425)
- 15 x 60 mm (diameter x height) flat base
- Specification certified - EPA certified

For use with 15 mm screw caps

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 "Guidelines for Establishing Test Procedures for the Analysis of Pollutants" and EPA 40 CFR 141 "National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water".



Vial color and material	Clear glass	Amber glass
Total volume	8 mL	8 mL
Usable volume	6 mL	6 mL
Residual volume	0.8 mL	0.8 mL
<b>Ordering information</b>		
200/pack	01549821	01549850



## 12 mL EPA screw vials

Performance level 2 for high-throughput applications

### Description

- Screw thread (15-425)
- Specification certified - Level 100 EPA vials

For use with 15 mm screw caps

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 "Guidelines for Establishing Test Procedures for the Analysis of Pollutants" and EPA 40 CFR 141 "National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water".



Vial color and material	Clear glass	Amber glass
Total volume	12 mL	12 mL
Usable volume	11 mL	11 mL
Residual volume	0.8 mL	0.8 mL
<b>Ordering information</b>		
200/pack 	01549815	01549847



## 16 mL EPA certified screw vials

Performance level 2 for high-throughput applications

### Description

- Screw thread (18-400)
- Specification certified - level 100 EPA certified

For use with 18 mm screw caps

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 "Guidelines for Establishing Test Procedures for the Analysis of Pollutants" and EPA 40 CFR 141 "National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water".



Vial color and material	Clear glass	Amber glass
Total volume	20 mL	16 mL
Usable volume	18 mL	15 mL
Residual volume	0.8 mL	0.8 mL
<b>Ordering information</b>		
200/pack 	01549843	01549847



## 20mL EPA screw vials

Performance level 2 for high-throughput applications

### Description

- Screw thread (20-400)
- 23 x 85 mm (diameter x height ) flat base
- Specification certified - Level 100 EPA vials

For use with 20 mm screw caps

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”.



Vial color and material	Clear glass
Total volume	20 mL
Usable volume	18 mL
Residual volume	0.8 mL
<b>Ordering information</b>	
100/pack	01549843



## 40 mL EPA screw vials

Performance level 2 for high-throughput applications

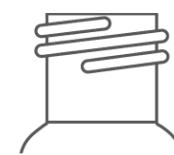
### Description

- Screw thread 24 mm (24-400)
- Specification certified - Level 100 EPA vials

For use with 24 mm crimp caps

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”.



Vial color and material	Clear glass	Amber glass
Total volume	40 mL	
Usable volume	38 mL	
Residual volume	0.8 mL	
<b>Ordering information</b>		
100/pack	01549810	01549849



## 15 mm screw caps

Performance level 2 for high-throughput applications

### Description

- Short thread screw closure 15 mm (15-425)
- Specification certified

For use with 8 and 12 mL screw vials (and other vials with screw 15 mm dimensions)



Cap color and material	White polypropylene, close top
Septum color and material	PE foam/PTFE
Septum thickness	—
Septum hardness	75 shore
<b>Ordering information</b>	
100/pack 	01549795



## 18 mm screw caps

Performance level 2 for high-throughput applications

### Description

- Screw closure 18 mm (18-400)
- Specification certified

For use with 20 mL EPA screw vials (and other vials with screw 18 mm dimensions)\* except for 20 mL headspace vials



Cap color and material	White polypropylene, close top
Septum color and material	PE foam/PTFE
Septum thickness	—
Septum hardness	75 shore
<b>Ordering information</b>	
100/pack 	01549825



## 24 mm screw caps

Performance level 2 for high-throughput applications

### Description

- Screw closure 24 mm (24-400)
- Specification certified

For use with 40 mL screw vials (and other vials with screw 24 mm dimensions)



Cap color and material	White polypropylene, close top
Septum color and material	PE foam/PTFE
Septum thickness	—
Septum hardness	75 shore
<b>Ordering information</b>	
100/pack	01549808



## 22 mm septa

Performance level 2 for high-throughput applications

### Description

- Specification certified

For use with screw vials (with 24-400 screw thread closure) with a diameter neck size of 22 mm



Product description	Septum (22 mm)
Color and material	Clear silicone/beige PTFE
Septum thickness	2.6 mm
Septum hardness	50 shore
<b>Ordering information</b>	
100/pack 	01549818



## Specification certified vial and cap kits, EPA kits, and scintillation kit

### Specification certified screw vial and cap kits

Performance Level 2 for high-throughput applications

#### Comments

- 2 mL screw vial (9 mm) with short thread screw closure
- Marking spot
- Specification certified



Key attributes	AVCS					
Vial color and material	Clear glass	Amber glass	Clear glass	Clear glass	Amber glass	
Vial total volume	2 mL					
Cap color and material	Blue polypropylene					
Septum color and material	Red silicone/ivory PTFE	Red silicone/ivory PTFE	Red PTFE/white silicone/red PTFE	White silicone/red PTFE	White silicone/red PTFE	
<b>Ordering information</b>						
100/pack		03452505	03452506	03452516	03452507	03452508



## Specification certified vial and cap kits, EPA kits, and scintillation kit

Continued

### Specification certified screw vial and cap kits Continued

Performance Level 2 for high-throughput applications

#### Comments

- 2 mL screw vial (9 mm) with short thread screw closure
- Marking spot
- Specification certified



Key attributes	SureStop/AVCS	SureStop/AVCS	SureStop/AVCS	AVCS	AVCS	Bonded	Bonded	
Vial color and material	–	–	Preslit septa	Soft septa	Preslit septa	Preslit septa	–	
Vial total volume	Clear glass	Amber glass	Clear glass	Clear glass	Clear glass	Clear glass	Clear glass	
Vial total volume	2 mL							
Cap color and material	Blue polypropylene	Blue polypropylene	Blue polypropylene	Blue polypropylene	Blue polypropylene	Grey polypropylene	Black polypropylene	
Septum thickness	White silicone/red PTFE	White silicone/red PTFE	White silicone/blue PTFE	Blue silicone/clear PTFE	White silicone/blue PTFE	White silicone/red PTFE	White silicone/red PTFE	
<b>Ordering information</b>								
100/pack		03452509	03452510	01549822	03452512	03452513	03452514	03452515



# Specification certified vial and cap kits, EPA kits, and scintillation kits

Continued

## Specification certified screw vial and cap kits Continued

Performance level 2 for high-throughput applications

### Description

- Assembled 2 mL screw vial (9 mm) with short thread screw closure
- Marking spot
- Specification certified



Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass
Vial total volume	2 mL	2 mL	2 mL	2 mL
Cap color and material	Blue propylene	Blue propylene	Blue propylene	Blue propylene
Septum color and material	Red PTFE/white silicone/ red PTFE	White silicone/ red PTFE	Red silicone/ ivory PTFE (RedRubber/PTFE)	White silicone/ blue PTFE, pre-slit
Ordering information				
100/pack	 01549802	01549814	01549823	01549844



# Specification certified vial and cap kits, EPA kits, and scintillation kits

Continued

## EPA screw vial and cap kits

Performance level 2 for high-throughput applications

### Description

- 4 mL – 40 mL screw vials with screw closures (13 mm – 24 mm)
- Level 100 EPA vials

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”.



Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass	Clear glass	Amber glass
Vial total volume	4 mL (13 mm)		8 mL (15 mm)		12 mL (15 mm)	
Cap color and material	White screw cap (PP) (13 mm) close top			White screw cap (PP) (15 mm) close top		
Septum color and material	PE foam/white PTFE closed top					
Ordering information						
100/pack	 03452544	03452545	—	—	—	—
200/pack	 —	—	03452542	03452543	03452540	03452541



# Specification certified vial and cap kits, EPA kits, and scintillation kit

Continued

## EPA screw vial and cap kits Continued

Performance level 2 for high-throughput applications

### Description

- 4 mL – 40 mL screw vials with screw closures (13 mm – 24 mm)
- Level 100 EPA vials

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”.



Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass	Clear glass	
Vial total volume	16 mL (18 mm 18-400)		20 mL (24 mm /24-400)			
Cap color and material	White screw cap (PP) (18 mm)		White screw cap (PP) (24 mm), assembled			
Septum color and material	PE foam/white PTFE closed top			Clear silicone/white PTFE open top		
Ordering information						
100/pack		—	—	03452534	03452535	01549830
200/pack		03452538	03452539	—	—	—



# Specification certified vial and cap kits, EPA kits, and scintillation kit

Continued

## EPA screw vial and cap kits Continued

Performance Level 2 for high-throughput applications

### Comments

- 4 mL – 40 mL screw vials with screw closures (13 mm – 24 mm)
- Level 100 EPA vials

These are processed and packaged under a strict registered ISO Quality Management System. The products are not certified to EPA standards or pre-cleaned. Every case of product is labeled with its production number and is custody sealed to ensure reliable chain-of-custody.

EPA screw vials convenience kits are recommended for discrete water sampling under EPA 40 CFR 136 “Guidelines for Establishing Test Procedures for the Analysis of Pollutants” and EPA 40 CFR 141 “National Interim Primary Drinking Water Regulations: Control of Trihalomethanes in Drinking Water”.



Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass	
Vial total volume	40 mL (24 mm)				
Cap color and material	White screw cap (PP) (24 mm), assembled		White screw cap (PP) (24 mm)		
Septum color and material	Clear silicone/white open top		PE foam/white PTFE closed top		
Ordering information					
100/pack		03452532	03452533	03452536	03452537



Key attributes	Scintillation
Vial color and material	Clear screw
Vial total volume	20 mL
Cap color and material	White closed screw cap
Septum color and material	Silver polypropylene foil
Ordering information	
5 x 100/pack	03452546

# Performance level 3: High performance

## When sensitivity is a must

Protect your most valuable samples and deliver consistent, reproducible results for your most demanding analyses

Our Thermo Scientific™ SureSTART™ Performance Level 3 products are packed in clean rooms to protect them against environmental factors, and contain the lowest amounts/levels of metals, extractables and leachable; ensuring that you can get the sensitivity and selectivity from your most challenging analytes confidently and consistently.

If you are looking for the ultimate performance from your methods, whilst maintain the highest levels of and sample security and integrity, our Performance Level 3 products will meet your needs. Select the products with the three waves.

For analytes that are prone to glass adsorption why not try our GOLD-grade glass technology which has been specifically designed for these more challenging polar analytes, as well as our silanised vials and inserts

This offering includes Thermo Scientific SureStop vials, which, when used with 9 mm AVCS caps, ensure an optimal seal every time. The SureStop vial-AVCS cap system is specially designed to prevent screw thread vial failures such as cap tilt, cap deformities, dislodged septa or septa push through, thus prevents injection failures and sample evaporation.

Our Performance level 3 septa have the highest purity as they have been conditioned to remove all the low-mid boiling volatiles providing the lowest extractables and leachables within the collection. You can also find within this performance level soft septa options for ultimate needle performance, as these products offer protection for even the most fragile needles with the highest gauge, and SPME fibers. You can also find our high temperature compatible septa here.

### Performance level 3 for high performance applications

- All products within this performance level are suitable for GC, HPLC/UHPLC, and nominal mass and high-resolution accurate mass (HR-AM) applications.
- Headspace vials and caps available from 6 mL – 20 mL.
- Vials are identified by three waves and a convenient write-on patch as standard.
- Vials available as screw, SureStop, snap and crimp.
- Vials available in glass, GOLD-grade glass, silanized and TPX.
- Vials available as clear or amber glass.
- Volume sizes ranging from 0.2 mL to 20 mL covering limited sample volumes to headspace analyses.
- Vials with fixed inserts are available.
- Caps available as screw, screw AVCS, snap and crimp.
- Use Thermo Scientific Manual or Electronic Crimpers and decrimpers for easy application and removal of crimp caps.
- LC/GC Certified, MSCERT and MSCERT+ Kits can be found within performance level 3.
- Buy vials and caps in bulk for greater savings.

### Specification certified

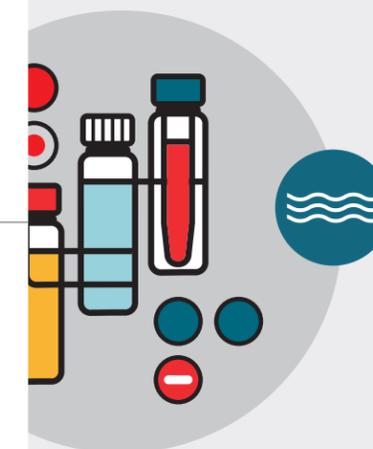
- All Thermo Scientific SureSTART vials are dimensionally verified.
- Inspected by automated optical and gauge inspection to ensure critical dimensions and tolerances.
- Meet all relevant requirements of US, EU, JPN Pharmacopeia.
- Uniform and defect-free

### Lot traceable

- 100% traceable through the manufacturing process
- Certificate of Conformance available by lot number upon request

# Performance level 3: High performance

Vials	Caps
0.2 mL TPX screw microvial	
Glass screw microvials	
1.4 mL total recovery vials	
1.5 mL total recovery glass screw microvials	9 mm screw caps
1.7 mL high recovery glass screw microvials	
<2 mL micovials	
2 mL glass screw vials	
2 mL GOLD-grade glass screw vials	
Glass crimp microvials	
2 mL GOLD-grade glass crimp vial	11 mm crimp caps
2 mL glass crimp vials	
Glass snap microvials	
1.5 mL total recovery glass snap microvials	
High recovery glass snap microvials	11 mm snap caps
2 mL glass snap vials	
Vial inserts for 2 mL vials	—
Glass crimp headspace vials	20 mm crimp caps
Crimpers and decrimpers	
Electronic crimpers and decrimpers	—
Kits	
LC/GC certified	
TOC	
MSCERT and MSCERT+	
Assembled	





## Screw vials and associated caps (<2 mL – 2 mL vials, 9 mm caps)



### What is TPX?

It is a transparent plastic (polymethylpentene) that is heat resistant and has excellent resealability.

### 0.2 mL TPX screw microvial with glass insert

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) fixed conical glass insert
- No marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw cap



Vial color and material	TPX with fixed insert Clear glass, amber transparent plastic
Total volume	200 µL
Usable volume	150 µL
Residual volume	1 µL
Ordering information	
100/pack	03452575



## Screw vials and associated caps Continued (<2 mL – 2 mL vials, 9 mm caps)

### Glass screw microvials

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) fixed conical insert, flat bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass	Amber glass
Total volume	300 µL	
Usable volume	250 µL	
Residual volume	4 µL	
Ordering information		
100/pack	03452247	03452248
10 x 100/pack	03452251	03452252
50 x 100/pack	03452255	03452256



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 1.4 mL and 1.5 mL total recovery glass screw microvial

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) total recovery internal base
- No marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass	Clear glass
Total volume	1.5 mL	1.4 mL
Usable volume	1.1 mL	1.0 mL
Residual volume	1 µL	1 µL
<b>Ordering information</b>		
100/pack 	03452550	6PSV9CHV1
10 x 100/pack 	03452556	—
50 x 100/pack 	03452562	—



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

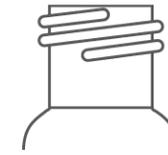
### 1.7 mL high recovery glass screw microvial

Performance Level 3 for high performance analysis

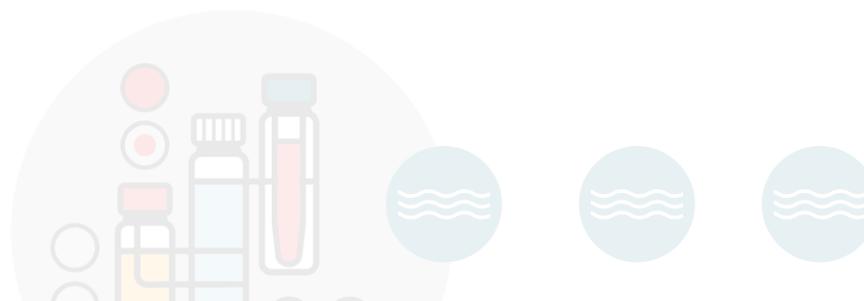
#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height) internal V-base
- No marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	Clear glass
Total volume	1.7 mL
Usable volume	1.5 mL
Residual volume	4 µL
<b>Ordering information</b>	
100/pack 	03452249
10 x 100/pack 	03452253
50 x 100/pack 	03452257





## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 2 mL Gold-grade glass screw vials

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw
- 12 mm x 32 mm (diameter x height), flat bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	SureStop, GOLD-grade glass
	Clear glass
Total volume	2 mL
<b>Ordering information</b>	
100/pack 	03452241
10 x 100/pack 	03452243
50 x 100/pack 	03452245



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 2 mL glass screw vials

Performance Level 3 for high performance analysis

#### Comments

- Screw
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- Specification certified

For use with 9 mm screw caps, or 9 mm AVCS screw caps



Vial color and material	—	Silianised	SureStop	SureStop
	Clear glass	Clear glass	Clear glass	Amber glass
Total volume	2 mL			
Usable volume	1.5 mL			
<b>Ordering information</b>				
100/pack 	03452235	03452265	03452238	03452242
10 x 100/pack 	03452236	—	03452239	03452244
50 x 100/pack 	03452237	—	03452240	03452246



# Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

## 9 mm screw caps Continued

Performance Level 3 for high-throughput applications

### Comments

- Short thread screw
- Specification certified

For use with <2 mL - 2 mL screw vials



		AVCS Cap					
Cap components	—	Pre-slit septa	—	Pre-slit septa	—	—	
	—	—	—	Soft septa	Soft septa		
Cap color and material	Blue polypropylene	Blue polypropylene	Blue polypropylene	Blue polypropylene	Blue polypropylene	Red polypropylene	
Septum color and material	Red PTFE/white silicone/red PTFE	White silicone/blue PTFE	White silicone/red PTFE	Blue silicone/clear PTFE	Blue silicone/clear PTFE	Red PTFE/white silicone/red PTFE	
Septum hardness	45 shore	54 shore	54 shore	30 shore	30 shore	45 shore	
<b>Ordering information</b>							
100/pack		03452267	03452268	03452269	03452294	03452295	03452296
10 x 100/pack		03452270	03452271	03452272	—	—	03452299
50 x 100/pack		03452273	03452274	03452275	—	—	03452302



# Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

## 9 mm screw caps Continued

Performance level 3 for high-throughput applications

### Description

- Short thread screw
- Specification certified
- Screw AVCS technology

For use with <2 mL – 2 mL screw vials



		AVCS cap	AVCS cap	AVCS cap
Cap components	Pre-slit septa	—	—	—
Cap color and material	Yellow polypropylene	Yellow polypropylene	Yellow polypropylene	Green polypropylene
Septum color and material	White silicone/blue PTFE	Red PTFE/White silicone/red PTFE	Red PTFE/White silicone/red PTFE	Red PTFE/White silicone/red PTFE
Septum thickness		1 mm		
Septum hardness	45 shore	50 shore	50 shore	50 shore
<b>Ordering information</b>				
100/pack		01549829	01549836	01549838



## Screw vials and associated caps Continued

(<2 mL – 2 mL vials, 9 mm caps)

### 9 mm screw caps

Performance Level 3 for high-throughput applications

#### Comments

- Short thread screw
- Specification certified

For use with <2 mL - 2 mL screw vials



Cap components	AVCS cap	AVCS cap	Bonded cap	Bonded cap	AVCS cap
Pre-slit septa		–	Pre-slit septa	–	–
	–	–	–	–	Magnetic cap
Cap color and material	Red polypropylene	Red polypropylene	Grey polypropylene	Black polypropylene	Blue polypropylene with gold magnetic tinplate cover
Septum color and material	White silicone/blue PTFE	White silicone/red PTFE	White silicone/red PTFE	White silicone/red PTFE	White silicone/red PTFE
Septum thickness	1 mm				
Septum hardness	54 shore				
<b>Ordering information</b>					
100/pack	03452297	03452298	03452312	03452313	03452311
10 x 100/pack	03452300	03452301	03452318	03452319	–
50 x 100/pack	03452303	03452304	03452324	03452325	–



## Crimp vials and associated caps

(<2 mL – 2 mL, 11 mm caps)

### Glass crimp microvials

Performance Level 3 for high performance analysis

#### Comments

- Crimp
- 12 mm x 32 mm (diameter x height) fixed conical insert, flat bottom base
- Marking spot
- Specification certified

For use with 8 mm crimp caps



Vial color and material	Clear glass	Amber glass	Clear gold glass	Clear gold glass
Total volume	300 µL	300 µL	300 µL	200 µL
Usable volume	250 µL	250 µL	250 µL	150 µL
Residual volume	4 µL	4 µL	2 µL	2 µL
<b>Ordering information</b>				
100/pack	03452247	03452248	01549851	01549852
10 x 100/pack	03452251	03452252	–	–
50 x 100/pack	03452255	03452256	–	–



## Crimp vials and associated caps Continued

(<2 mL – 2 mL, 11 mm caps)

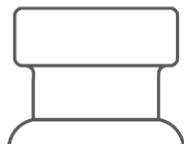
### 2 mL glass crimp vials

Performance Level 3 for high performance analysis

#### Comments

- Crimp
- 12 mm x 32 mm (diameter x height)
- Marking spot
- Specification certified

For use with 11 mm crimp caps



Vial color and material	Clear glass
Total volume	2 mL
Usable volume	1.5 mL
<b>Ordering information</b>	
100/pack 	03452186
10 x 100/pack 	03452187
50 x 100/pack 	03452188



## Crimp vials and associated caps Continued

(<2 mL – 2 mL, 11 mm caps)

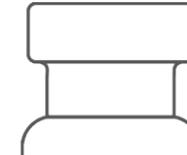
### 2 mL GOLD-grade crimp vials

Performance Level 3 for high performance analysis

#### Comments

- Crimp
- 12 mm x 32 mm (diameter x height)
- Marking spot
- Specification certified

For use with 11 mm crimp caps



Vial color and material	GOLD-grade glass
Total volume	2 mL
<b>Ordering information</b>	
100/pack 	03452201



## Crimp vials and associated caps Continued

### (<2 mL – 2 mL, 11 mm caps)

### 11 mm crimp caps

Performance Level 3 for high performance analysis

#### Comments

- Crimp closure (11 mm)
- Specification certified

For use with <2 mL - 2 mL crimp vials, or <2 mL - 2 mL snap vials

Use with 11 mm crimpers and decrimpers



Cap color and material	Silver aluminium	Silver magnetic steel	Silver aluminium	Silver magnetic steel
Septum color and material	Red PTFE/ white silicone/red PTFE	White silicone / red PTFE	Blue silicone/ clear PTFE	Blue silicone/ clear PTFE
Septum thickness	1 mm			
Septum hardness	45 shore	57 shore	30 shore	30 shore
Ordering information				
100/pack	03452208	01549803	03452209	03452222



## Snap vials and associated caps

### (<2 mL – 2 mL vials, 11 mm caps)

### Glass snap microvials

Performance Level 3 for high performance analysis

#### Comments

- Snap
- 11 mm x 32 mm (diameter x height) fixed conical insert, flat bottom base
- Marking spot
- Specification certified

For use with 11 mm snap caps or 11 mm crimp caps



Vial color and material	Clear glass	Amber glass
Total volume	300 µL	
Usable volume	250 µL	
Residual volume	4 µL	
Ordering information		
100/pack	03452202	03452205
10 x 100/pack	03452203	03452206
50 x 100/pack	03452204	03452207



## Snap vials and associated caps Continued

(<2 mL – 2 mL vials, 11 mm caps)

### 1.5 mL total recovery glass snap microvials

Performance Level 3 for high performance analysis

#### Comments

- Snap
- 12 mm x 32 mm (diameter x height) total recovery internal base
- No marking spot
- Specification certified

For use with 11 mm snap caps



Vial color and material	Clear glass
Total volume	1.5 mL
Usable volume	1.1 mL
Residual volume	1 µL
<b>Ordering information</b>	
100/pack	03452549
10 x 100/pack	03452555
50 x 100/pack	03452561



## Snap vials and associated caps Continued

(<2 mL – 2 mL vials, 11 mm caps)

### High recovery glass snap microvials

Performance Level 3 for high performance analysis

#### Comments

- Snap
- 12 mm x 32 mm (diameter x height) internal V-base
- No marking spot
- Specification certified

For use with 11 mm snap caps



Vial color and material	Silanized glass	Clear Glass	Clear glass
Total volume	1.7 mL	1.7 mL	1.5 mL
Usable volume	1.5 mL	1.3 mL	1.2 mL
Residual volume		4 µL	
<b>Ordering information</b>			
100/pack	03452371	01549801	03452355
10 x 100/pack	–	–	03452361
50 x 100/pack	–	–	03452367



## Snap vials and associated caps Continued

(<2 mL – 2 mL vials, 11 mm caps)

### 2 mL glass snap vials

Performance Level 3 for high performance analysis

#### Comments

- Snap
- 12 mm x 32 mm (diameter x height)
- Marking spot
- Specification certified

For use with 11 mm snap caps



Vial color and material	Clear glass
Total volume	2 mL
Usable volume	1.5 mL
<b>Ordering information</b>	
100/pack	03452344
10 x 100/pack	03452347
50 x 100/pack	03452350



## Snap vials and associated caps Continued

(<2 mL – 2 mL vials, 11 mm caps)

### 11 mm snap cap

Performance level 3 for high performance analysis

#### Description

- Snap closure (11 mm)
- Specification certified

For use with <2 mL and 2 mL snap vials



Key attributes	Pre-slit	–	–	Star pre-slit	–	–
Cap color and material	Blue polyethylene	Blue polyethylene	Blue polyethylene	Clear polyethylene	Red polyethylene	Red polyethylene
Septum color and material	–	–	Soft	–	–	–
Septum color and material	White silicone/ blue PTFE	White silicone/ red PTFE	Blue silicone/ clear PTFE	White silicone/ red PTFE	Red silicone/ blue PTFE	White silicone/ red PTFE
Septum thickness	1 mm	1 mm	1 mm	1 mm	1.3 mm	1.3 mm
Septum hardness	54 shore	54 shore	45 shore	54 shore	54 shore	54 shore
<b>Ordering information</b>						
100/pack	03452372	03452373	03452380	03452381	03452382	03452383
10 x 100/pack	03452374	03452375	03452386	03452387	03452388	03452389
50 x 100/pack	03452376	03452377	03452392	03452393	03452394	03452395



## Snap vials and associated caps Continued

(<2 mL – 2 mL vials, 11 mm caps)

### 11 mm snap cap Continued

Performance level 3 for high performance analysis

#### Description

- Snap closure (11 mm)
- Specification certified

For use with <2 mL and 2 mL snap vials



Key attributes	—	—	—	—	—
Cap color and material	Red polyethylene	Red polyethylene	Green polyethylene	Yellow polyethylene	Clear polyethylene
Septum color and material	Blue silicone/ clear PTFE, soft	Red PTFE/ white silicone/ red PTFE	White silicone/ blue PTFE	White silicone/ blue PTFE	White silicone/ blue PTFE
Septum thickness	54 shore	50 shore	45 shore	45 shore	45 shore
Septum hardness	1.3 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm

#### Ordering information

Quantity	Icon	03452383	01549846	01549817	01549832	01549791
100/pack						
10 x 100/pack						
50 x 100/pack						



## Inserts

(2 mL vials)

### Inserts for 2 mL vials

Performance Level 3 for high-throughput applications

#### Comments

- 6 mm x 31 mm (diameter x height)
- No marking spot
- Specification certified

For use with 2 mL screw vials, 2 mL snap vials or 2 mL crimp vials



Insert color and material	GOLD-grade glass	Deactivated/ silanized glass	—	—	—	—	—
	0.2 mL clear conical glass insert	0.3 mL clear conical glass insert, with PE polyspring	0.3 mL conical glass insert, with PE polyspring	0.4 mL clear conical glass insert, with pulled point	0.4 mL clear conical glass insert, with pulled point	0.5mL clear flat bottom glass insert	0.5mL clear flat bottom glass insert
Total volume	200 µL	300 µL	300 µL	400 µL	400 µL	500 µL	500 µL
Usable volume	150 µL	250 µL	250 µL	350 µL	350 µL	450 µL	450 µL
Residual volume	2 µL	4 µL	4 µL	4 µL	4 µL	35 µL	35 µL
Height	31 mm	30 mm	30 mm	31 mm	31 mm	31 mm	31 mm
Inner diameter	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm
Base style	Conical base	Conical base	Conical base	Conical base	Conical base	Flat base	Flat bottom

#### Ordering information

Quantity	Icon	—	03452337	03452330	03452331	01549805	—	—
100/pack								
10 x 100/pack		03452336	03452339	03452332	03452333	—	—	—
50 x 100/pack		—	03452341	03452334	03452335	—	01549835	03452343



## Headspace crimp vials and associated caps (6 mL – 20 mL vials, 20 mm caps)

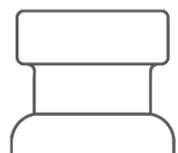
### 6 mL, 10 mL and 20 mL glass crimp headspace vials

Performance level 3 for high performance analysis

#### Description

- Crimp (20 mm)
- Marking spot
- Specification certified

For use with 20 mm crimp caps



Vial color and material	Clear glass			
Total volume	6 mL	10 mL	20 mL	20 mL
Usable volume	5 mL	8 mL	18 mL	18 mL
Residual volume	—	—	—	0.8 mL
Dimensions	21.75 mm x 38 mm	22.75 mm x 46 mm	22.75 mm x 75.0 mm	22.75 mm x 75.0 mm
Rim and base style	Square rim, flat bottom	Beveled rim, flat bottom	Beveled rim, flat bottom	Beveled rim, round bottom

#### Ordering information

100/pack		03452430	03452429	03452425	03452421
10 x 100/pack		03452440	03452439	03452435	03452431
50 x 100/pack		03452450	03452449	03452445	03452441



## Headspace crimp vials and associated caps (6 mL – 20 mL vials, 20 mm caps)

### 8 mm crimp caps

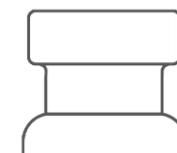
Performance level 3 for high performance analysis

#### Description

- Crimp closure (8 mm)
- Specification certified

For use with <2 mL crimp vials (with neck size of 8 mm)

Use with 8 mm crimpers and decrimpers



Vial color and material	—
Total volume	Silver aluminium
Usable volume	Blue silicone/ clear PTFE; soft
Residual volume	30 shore
Ordering information	1 mm

#### Ordering information

100/pack		6PCV61F
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# Headspace crimp vials and associated caps Continued

## (6 mL – 20 mL vials, 20 mm caps)

### 18 mm precision screw caps

Performance level 3 for high performance analysis

#### Description

- Crimp closure
- Specification certified

For use with 10 mL and 20 mL screw top headspace vials



Cap color and material	Magnetic Silver aluminium	Magnetic Silver aluminium
Septum color and material	Blue silicone/ clear PTFE; soft	Red silicone/ natural PTFE; high temperautre
Septum thickness	2 mm	3 mm
Septum hardness	45 shore	45 shore
<b>Ordering information</b>		
100/pack	03452482	03452483
10 x 100/pack	03452488	03452489



# Headspace crimp vials and associated caps Continued

## (6 mL – 20 mL vials, 20 mm caps)

### 20 mm crimp caps

Performance Level 3 for high performance analysis

#### Comments

- Crimp closure (20 mm)
- Specification certified

For use with 10 mL and 20 mL crimp headspace vials (with neck size of 20 mm)

Use with 20 mm crimpers and decrimpers



Cap color and material	– Silver aluminium	Magnetic Red aluminium/ magnetic tinplate	Magnetic Silver aluminium/ magnetic tinplate	Magnetic Blue aluminium/ magnetic tinplate	Magnetic Red aluminium/ magnetic tinplate
Septum color and material	Blue silicone/ clear PTFE; soft	Blue silicone/ clear PTFE; soft	Red silicone/ natural PTFE; high Temperature	White silicone/ blue PTFE	Blue silicone/ clear PTFE; soft
Septum thickness	45 shore	45 shore	54 shore	54 shore	50 shore
Septum hardness	3 mm	3 mm	3 mm	3 mm, 1.5 mm at thinned area	3 mm
<b>Ordering information</b>					
100/pack	03452451	03452478	03452479	03452481	01549839
10 x 100/pack	03452456	03452484	03452485	03452487	–
50 x 100/pack	03452461	03452490	03452491	03452493	–



# Specification certified, LC/GC certified, MSCERT and MSCERT+ kits

## 1. Specification certified kits

### For everyday analysis

- Tested and certified for up to 15 critical physical specifications

## 2. LC/GC certified kits

### For chromatographic analysis

- Tested and certified for up to 15 critical physical specifications
- Tested and certified using LC-UV and GC-FID to ensure that there are no residual manufacturing agents present in the vial
- A certificate is provided with each kit

## 3. MSCERT and MSCERT+ kits

### For use with mass spectrometry systems

- Our mass spec certified vials carry our highest level of certification and are recommended for low adsorption
- Tested and certified for up to 15 critical physical specifications
- Tested using LC-MS and GC-MS for low contamination
- Certification comes with the kit
- MSCERT+ kits are pre-cleaned and certified for particle count
  - Highly recommended for direct injection analysis (DIA)

	MSCERT	MSCERT+
Proprietary cleaning process to reduce particulates	—	+
Packaged in cleanroom conditions	—	+
Cleanest product available on the market	—	+
Vial/closure combination tested by GC/MS and LC/MS	+	+
Batch specific test certificate with MS-chromatograms	+	+
Glass surface with very low adsorption tendencies for all polar compounds	+	+
Closures contain very soft ultra-low bleed silicone septa with PTFE layer or bonded caps	+	+
Optimised for trace analysis	+	+



# Specification certified, LC/GC certified, MSCERT and MSCERT+ kits Continued

## Specification certified screw vial and cap kits

Performance Level 3 for high performance analysis

### Comments

- Short thread screw kit
- 12 mm x 32 mm (diameter x height) fixed conical glass insert
- No marking
- Specification certified

For use with short thread screw cap closure



Key attributes	Bonded caps TPX vials 0.2 mL with fixed glass insert
Vial color and material	Amber TPX
Vial total volume	200 µL
Vial usable volume	150 µL
Vial residual volume	1 µL
Cap color and material	Black screw cap
Septa color and material	White silicone/red PTFE
Septa thickness	1 mm
<b>Ordering information</b>	
100/pack 	03452576



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued

### Specification certified screw vial and cap kits Continued

Performance Level 3 for high performance analysis

Comments	
<ul style="list-style-type: none"> <li>• Short thread screw kit</li> <li>• 12 mm x 32 mm (diameter x height) flat bottom base</li> <li>• Marking spot</li> <li>• Specification certified</li> </ul>	
For use with short thread screw cap closure	



Key attributes	GOLD-grade glass
	SureStop vials
	AVCS caps
Vial total volume	2 mL
Vial color and material	Clear glass
Cap color and material	Blue screw cap (PP)
Septa color and material	White silicone/red PTFE
Septa thickness	1 mm
<b>Ordering information</b>	
100/pack 	03452511

### LC/GC certified kits: <2 mL vials with 9 mm caps

Performance level 3 for high performance analysis

Description	
<ul style="list-style-type: none"> <li>• Short thread screw kit</li> <li>• 12 mm x 32 mm (diameter x height) flat bottom base</li> <li>• Marking spot</li> <li>• LC/GC certified</li> </ul>	
For use with short thread screw cap closure	



Key attributes	Bonded caps	AVCS caps
	Pre-slit septa	Pre-slit septa
Vial total volume	1.5 mL	0.3 mL
Vial color and material	Clear glass	Clear glass
Cap color and material	Frey screw cap (PP)	Frey screw cap (PP)
Septa color and material	Clear silicone/clear PTFE	White silicone/blue PTFE
Septa thickness	1 mm	
<b>Ordering information</b>		
100/pack	01549800	01549809



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued

**LC/GC certified kits – 2 mL vials with 9 mm caps**

Performance Level 3 for high performance analysis

**Comments**

- Short thread screw kit
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- LC/GC certified

For use with short thread screw cap closure



	—	—	—	SureStop vials	SureStop vials	SureStop vials
Key attributes	Bonded caps	Bonded caps	AVCS caps	AVCS caps	AVCS caps	AVCS caps
	Pre-slit septa	Pre-slit septa	Pre-slit septa	Pre-slit septa	—	—
Vial total volume	2 mL					
Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass	Clear glass	Amber glass
Cap color and material	Grey screw cap (PP)	Grey screw cap (PP)	Blue screw cap (PP)	Blue screw cap (PP)	Blue screw cap (PP)	Blue screw cap (PP)
Septa color and material	White silicone/red PTFE	White silicone/red PTFE	White silicone/blue PTFE	White silicone/blue PTFE	White silicone/red PTFE	
Septa thickness	1 mm					
<b>Ordering information</b>						
100/pack	03452517	03452518	03452519	03452520	03452521	03452522



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued

**LC/GC certified assembled kits: 2 mL vials with 9 mm caps**

Performance level 3 for high performance analysis

**Description**

- Short thread screw kit
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- LC/GC certified

For use with short thread screw cap closure



Key attributes	Bonded caps	AVCS caps
	Pre-slit septa	Pre-slit septa
Vial total volume	2 mL	2 mL
Vial color and material	Clear glass	Clear glass
Cap color and material	Grey screw cap (PP)	Grey screw cap (PP)
Septa color and material	White silicone/red PTFE	White silicone/red PTFE
Septa thickness	1 mm	
<b>Ordering information</b>		
100/pack	01549827	01549831



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued

### MSCERT kits

Performance Level 3 for high performance analysis

Comments				
<ul style="list-style-type: none"> <li>• Short thread screw kit</li> <li>• 12 mm x 32 mm (diameter x height) flat bottom base</li> <li>• Marking spot</li> <li>• MSCERT certified</li> </ul>				
For use with short thread screw cap closure				

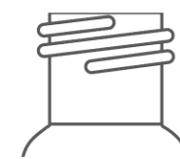


Key attributes	SureStop vials				
	AVCS caps				
	—	—	Pre-slit septa	Pre-slit septa	
Vial total volume	2 mL				
Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass	
Cap color and material	Blue screw cap (PP)				
Septa color and material	Blue silicone/clear PTFE septa				
Septa thickness	1 mm				
<b>Ordering information</b>					
100/pack		03452567	03452568	03452569	03452570

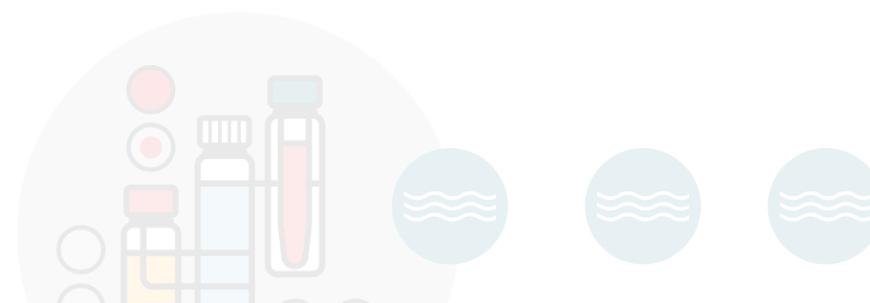
### MSCERT kits Continued

Performance Level 3 for high performance analysis

Comments				
<ul style="list-style-type: none"> <li>• Short thread screw kit</li> <li>• 12 mm x 32 mm (diameter x height) flat bottom base</li> <li>• Marking spot</li> <li>• MSCERT certified</li> </ul>				
For use with short thread screw cap closure				



Key attributes	Pre-slit septa				
	Bonded caps				
	—	—	SureStop vials	SureStop vials	
Vial total volume	2 mL	—	—	—	
Vial color and material	Amber glass	Amber glass	Clear glass	Amber glass	
Cap color and material	Blue screw cap (PP)				
Septa color and material	White silicone/beige PTFE				
Septa thickness	1 mm				
<b>Ordering information</b>					
100/pack		03452571	03452572	03452573	03452574





Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued



Specification certified, LC/GC certified,  
MSCERT and MSCERT+ kits Continued

### MSCERT+ kits

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw kit
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- MSCERT+ certified and pre-cleaned

For use with short thread screw cap closure



Key attributes	SureStop vials			
	AVCS caps			
	—	—	Pre-slit septa	Pre-slit septa
Vial total volume	2 mL			
Vial color and material	Clear glass	Amber glass	Clear glass	Amber glass
Cap color and material	Blue screw cap			
Septa color and material	Blue silicone/clear PTFE			
Septa thickness	1 mm			
<b>Ordering information</b>				
100/pack	03452523	03452524	03452527	03452528

### MSCERT+ kits Continued

Performance Level 3 for high performance analysis

#### Comments

- Short thread screw kit
- 12 mm x 32 mm (diameter x height) flat bottom base
- Marking spot
- MSCERT+ certified

For use with short thread screw cap closure



Key attributes	SureStop vials		Fused-insert	
	Bonded			
	—	—	—	Pre-slit septa
Vial total volume	2 mL	2 mL	0.3 mL	0.3 mL
Vial color and material	Clear glass	Amber glass	Clear glass	Clear glass
Cap color and material	Blue screw cap	Blue screw cap	Blue screw cap	Grey screw cap
Septa color and material	Clear silicone/clear PTFE			
Septa thickness	1 mm			
<b>Ordering information</b>				
100/pack	03452525	03452526	03452529	03452530



# Specification certified, LC/GC certified, MSCERT and MSCERT+ kits Continued



# Specification certified, LC/GC certified, MSCERT and MSCERT+ kits Continued

## MSCERT+ kits Continued

Performance Level 3 for high performance analysis

Comments
<ul style="list-style-type: none"> <li>High recovery vial</li> <li>Short thread screw vial</li> <li>12 mm x 32 mm (diameter x height) flat bottom base</li> <li>MSCERT+ certified</li> </ul>
For use with short thread screw cap closure



Key attributes	Total recovery
	Bonded
	Pre-slit
Vial total volume	1.5 mL
Vial color and material	Clear glass
Cap color and material	Grey screw cap
Septa color and material	Clear silicone/clear PTFE
Septa thickness	1 mm
<b>Ordering information</b>	
100/pack 	03452531

## TOC certified screw vial and cap kits

Performance Level 3 for high performance analysis

Comments
<ul style="list-style-type: none"> <li>TOC certification (20 ppb)</li> <li>TOC certification (10 ppb)</li> </ul>
Our low-level certified vials for Total Organic Carbon testing and sampling are manufactured, tested and packaged by exacting standards.
Thermo Scientific™ TOC Certified Containers are certified to contribute <10ppb or < 20ppb TOC as background.



Vial description	40 mL (24 mm) screw glass vial	
Vial color and material	Clear	
Cap description	Bonded white screw cap (24-400) (PP)	
Septum color and material	White silicone/clear PTFE open top	
Septum thickness	3 mm	
Septum hardness	50 shore	
Certification level	TOC certification (20 ppb)	TOC certification (10 ppb)
<b>Ordering information</b>		
72/pack 	03452547	03452548



### EPA certified assembled kits: 40 mL with 24 mm caps

Performance level 3 for high performance analysis

#### Description

- Screw thread 24 mm (24-400)
- 28 mm x 95 mm (diameter x height) flat bottom base
- Processed and packaged under a registered ISO Quality Management System
- Laboratory certified to meet U.S. EPA Super Fund Standards in accordance with the latest edition of EPA's "Specifications and Guidance for Contaminant Free Sample Containers"
- Every case contains a Certificate of Analysis and is custody sealed to ensure reliable chain-of-custody



Vial description	40 mL (24 mm) screw glass vial
Vial color and material	Clear
Cap description	Bonded white screw cap (24-400) (PP)
Septum color and material	White silicone/clear PTFE open top
Septum thickness	3 mm
Septum hardness	50 shore
<b>Ordering information</b>	
100/pack	01549848

## SureSTART vials and caps accessories



### Manual crimpers and decrimpers

#### Manual crimpers and decrimpers

Achieve secure, repeatable crimps or remove seals with minimized risk of damage

Use Thermo Scientific™ SureSTART™ vial crimpers and decrimpers to manually attach or remove crimp caps from vials, respectively. These manual crimpers and decrimpers are available in 8 mm, 11 mm, 13 mm, and 20 mm sizes and allow you to easily seal or remove crimp caps reliably.



Product description	Red manual crimper	Red manual crimper	Red manual crimper	Red manual crimper	Stainless steel manual crimper
Suitable for	8 mm crimp caps	11 mm crimp caps	13 mm crimp caps	20 mm crimp caps	20 mm crimp caps
<b>Ordering information</b>					
1/pack	03452417	03452414	03452415	03452416	03452413



Product description	—	Black manual decrimper	Black manual decrimper	—	Black manual decrimper
Suitable for	—	11 mm crimp caps	13 mm crimp caps	—	20 mm crimp caps
<b>Ordering information</b>					
1/pack	—	03452419	03452418	—	03452420



# Electronic crimpers and decrimping tools

## Electronic crimpers and decrimpers

Our electronic Thermo Scientific crimper portfolio includes tools for 8 mm, 11 mm, 13 mm, and 20 mm crimp caps.

The tools provide all important settings like actual crimp power at one glance. The hand-held crimpers and decrimpers allow crimping of vials with aluminium, pressure release and bi-metal caps while remaining in most sample trays.

The crimp head selection includes also special crimp heads for 13 mm and 20 mm flip-off caps, further specials are available on request.

Attach or remove crimp vial seals with high sample security with a simple, one-handed push of a button.

### Electronic hand-held crimpers and decrimpers

The battery charge icon on the color screen of the hand-held tools changes to red when battery is low. Each hand-held tool comes with fully rechargeable lithium ion battery and universal power supply/recharger and international plug adapters.

For steel caps and/or high numbers of crimp or decrimp processes per day we recommend the Thermo Scientific™ High-Power Crimp Station as it provides the highest crimping force independent from battery charge status.



Versatile and programmable crimp station

### Electronic crimpers and decrimpers features and benefits

- Tools available for use with 8 mm, 11 mm, 13mm, and 20 mm crimp vial caps
- Available as handheld and high-power models
- These electronic vial crimpers also feature adjustable settings for best crimp results and a motor with extended lifetime and no particle emission
- Interchangeable crimper and decrimper jaw sets for Programmable Electronic High-Power Crimp Stations
- One hand operation with a simple push of a button
- Error message feedback after the incorrect crimping process
- Adjustable settings for best crimp results
- Actual crimp power setting displayed on the color screen.
- 8 different languages available—EN, CN, JA, DE, FR, ES, IT, KO
- Motor with extended lifetime and no particle emission
- Free hands for faster crimping operations with the adjustable Thermo Scientific™ Accessory Base for Programmable Electronic High-Power Crimp Stations. (ECRH-STAND)
- Each High-Power Crimper comes with 12-volt DC supply with power cord
- Crimp and Decrimp Heads for the High-Power Crimper are included in the kits or available separately



# Electronic crimpers and decrimping tools

Continued

## Electronic hand-held battery-operated crimper (black) Generation 4



Product description	Electronic hand-held battery-operated crimper (black). Generation 4			
Suitable for	8 mm crimp caps	11 mm crimp caps	13 mm crimp caps	20 mm crimp caps
Ordering information				
1/pack	03253527	03253524	03253525	03253526

## Electronic hand-held battery-operated decrimper (black) Generation 4

Product description	Electronic hand-held battery-operated decrimper (black). Generation 4			
Suitable for	—	11 mm crimp caps	13 mm crimp caps	20 mm crimp caps
Ordering information				
1/pack	—	03253532	03253533	03253534

## Electronic crimper for FTFO and Flip-Off crimper

Product description	13 mm electronic crimper for FTFO	20 mm electronic Flip-Off crimper
Ordering information		
1/pack	—	—



# Electronic crimpers and decrimping tools

Continued

## Electronic high-power programmable crimp station



Product description	Electronic high-power crimp station (without crimp heads) (black). Generation 2
Ordering information	
1/pack	TS60180ECRHB

## Electronic high-power programmable crimper kits



Product description	Electronic high-power programmable crimper kit		
Suitable for	11 mm	13 mm	20 mm
Include	11 mm crimp head 11 mm decrimp head	13 mm crimp head 13 mm decrimp head	20 mm crimp head 20 mm decrimp head
Ordering information			
1/pack	03253528	03253529	03253530



# Electronic crimpers and decrimping tools

Continued

## Accessories for electronic high-power programmable crimper



Product description	Accessory base for electronic crimpers: Height adjustable and solvent resistant (consists of base plate and bar)		
Ordering information			
1/pack		03050358	



Product description	8 mm crimp head	11 mm crimp head	13 mm crimp head	20 mm crimp head
Ordering information				
1/pack		03050359	03050360	03050362 03050365

Product description	13 mm Flip-Off crimp head	20 mm Flip-Off crimp head
Ordering information		
1/pack		03050364 03050367

## Accessories for electronic high-power programmable decrimper

Product description	11 mm decrimp head	13 mm decrimp head	20 mm decrimp head
Ordering information			
1/pack		03050361 03050363	03050366

# WebSeal Performance Level 1 products



## Well plates and mats

Performance Level 1 for everyday analysis

A full selection of high quality sample well plates for your UHPLC, LC and GC applications

We offer a comprehensive range of Thermo Scientific™ 96- and 384- well plates for complex and routine analyses in high-throughput screening laboratories.

We offer a broad selection of polypropylene (PP) well plates that meet ANSI and SBS standards with different sealing options and fit most manifolds, autosamplers, and robots.

### Handle more samples in less time

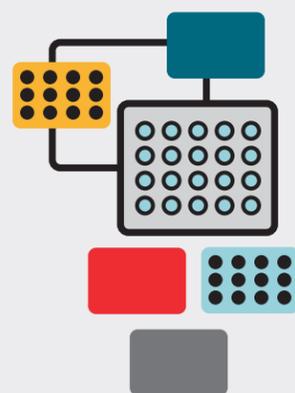
- Low volume and high recovery cavity

### Solutions for all applications

- Chromatography tested for solvent compatibility and inertness

### Ultimate sample security

- Low-leachable, high-purity materials and manufacturing processes



## Well plates and mats Continued

Performance Level 1 for everyday analysis

### WebSeal well plates

Plastic, non-coated, non-sterile, chromatography tested

#### Comments

- Thermo Scientific™ WebSeal™ well plates are manufactured from a GC/MS tested polypropylene material
- Microplates are chemically and thermally resistant and will tolerate temperatures from  $-80^{\circ}\text{C}$  to  $+121^{\circ}\text{C}$
- SBS and ANSI standard footprint design for broad instrument compatibility
- Microplates are ideal for pharmaceutical applications, sample collection and storage, combinatorial chemistry and HTS applications
- U- and V- bottom wells for optimal sample recovery



Description	Total height	Well format	Total volume (μL)	Working volume range μL/well	Cat. no.	Pack size
96 well microplate, round well	14.4	V-Shape, 8 mm diameter	450	10-400	03252400	20
					03252401	120
	14.5	V-Shape, 8 mm diameter	500	20-500	03252402	10
					03252403	12
96 well plates, round well	26.5	U-shape, 8 mm diameter, mid height plate	1100	50-1900	03252407	60
					60180P154	50
	31.6	U-shape, 8 mm diameter, deep-well plate	1300	50-1000	03252404	5
					03252405	50
96 deep well plate, square well	45.0	U-shape, 8 mm diameter, deep-well plate	2000	50-1900	03252406	5
					13622480	50
	31.0	U-shape, square, mid height plate	1600	50-1300	60180P155	96
					03252408	5
384 well microplate	44.0	V-Shape, square, deep-well plate	2000	50-1900	03252409	50
					03252416	10
	22.0	V-shape, square, mid-height plate	145	4-120	13622482	100
03252412					5	
22.0	V-shape, square, mid-height plate	252	5-240	13622481	100	



# Well plates and mats Continued

## Performance Level 1 for everyday analysis

### WebSeal mats and sealing tapes, non-sterile

For plates with round and square wells of 8 mm or 384 well plates

#### Comments

- Mats manufactured of EVA (Ethylene-vinyl acetate) or pure silicone with or without PTFE coating
- The footprint permits plates to be securely stacked without robotic arm interference
- Eliminates cross contamination of samples
- Dry heat autoclavable (only silicone mats) with excellent chemical compatibility, withstand low temperature to -80°C
- Resists coring and tearing
- Superior resealability after multiple injections
- Available pre-slit for easy penetration and reduced vacuum formation
- Sealing tapes minimize evaporation and protect samples from contamination and spilling.
- Adhesive seals effectively seal all microplate formats
- Wide range of adhesive seals for every assay
- Thin, lightweight tapes seal onto the plate with a convenient, handheld applicator (available separately, cat. no. 03252445)



# Well plates and mats Continued

## Performance Level 1 for everyday analysis

### WebSeal mats and sealing tapes, non-sterile Continued

For plates with round and square wells of 8 mm or 384 well plates

Description	Color	Material	Well design	Pre-slit	Cat. no.	Pack size
WebSeal mats CLR silicone mat, round well		Silicone	96 round well, 8 mm diameter, flat base with cross		60180M184	50
WebSeal mats alcohol resistant), round well	Clear	EVA	96 round well, 8 mm diameter	No	03252433	5
					13622368	50
WebSeal CLR silicone mat, round well		Silicone			13622367	
WebSeal mats (solvent resistant), round well	Blue	Silicone/PTFE	96 round well – flat base, 8 mm diameter, large penetration area	Yes	13622371	
				No	03252434	5
WebSeal mats (alcohol resistant), square well		EVA	96 square well - flat base	Yes	03252435	
				No	13622369	
WebSeal CLR silicone mat, square well	Clear	Silicone	96 square well – flat base, 8 mm diameter, large penetration area	No	13622370	50
				Yes	03252436	
				No	03252437	5
				No	60180M185	50
				Yes	03252438	5
Sealing tape, -40°C - 90°C		PE/silicone		No	03252439	
					60180M186	50
Sealing tape, -70°C - 100°C		PES/silicone			03252440	
Sealing tape, -80°C - 120°C	Silver	Aluminum/silicone		N/A	03252441	
Sealing tape with SRA (synthetic rubber adhesive)		Polyolefin/rubber	N/A	No	03252442	100
Re-sealing tape with 3 layer no adhesive at cavity area	Clear	PET/silicone/PET		Yes	03252443	
					03-376-618	25
Hand held sealing tape applicator	Gold	N/A		N/A	03252444	2
Hand held mat applicator	Black				03252445	1

# WebSeal Performance Level 2 products



## Well plates and mats Continued

Performance Level 2 for high-throughput applications



## Well plates and mats

Performance Level 2 for high-throughput applications

### WebSeal well plates

Plastic, non-coated, non-sterile, certified

#### Comments

- Polypropylene microplates are manufactured from ultra low bleed high purity basis resin
- Plates are fully LOT tested by GC-MS and LC/MS for organic extractables
- Microplates are chemically and thermally resistant and will tolerate temperatures from -80°C to +121°C
- SBS and ANSI standard footprint design for broad instrument compatibility
- Microplates are ideal for pharmaceutical applications, sample collection and storage, combinatorial chemistry and HTS applications
- U- and V- bottom wells for optimal sample recovery, Total V-plates for low volume applications

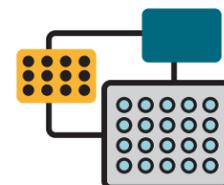
03252153



03252155



03252159



### WebSeal well plates Continued

Plastic, non-coated, non-sterile, certified

Description	Total height	Well format	Total volume (μL)	Working volume range μL/well	Cat. no.	Pack size
96 well microplate, low volume	15.0	Total V-shape, 5.6 mm diameter	100	5-80	60180P210	50
		Flat bottom, 7 mm diameter	350	10-300	03252447	100
				10-300	03252448	10
96 well microplate, round well	14.7	U-shape, 7 mm diameter	270	10-250	03252449	100
					03252150	10
		V-shape, 7 mm diameter	220	10-190	03252151	100
	03252152			10		
96 well mid height plates, round well	41.6	U-shape, 7 mm diameter	1200	50-1100	03252153	50
	41.6				03252154	5
96 deep well plate, square well	44.4	V-shape, 8 mm diameter	2000	50-1900	03252155	50
					03252156	5
384 well microplate	14.4	U-shape, square, micro titer plate	58	2-35	03252157	60
					03252158	10
	30.2	V-shape, square, deep well plate	300	5-240	03252159	48
					03252160	6



## Well plates and mats Continued

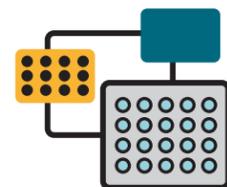
Performance Level 2 for high-throughput applications

### WebSeal mats, non-sterile

For certified well plates with 7 mm round well cavities, 8 mm square wells or 384 plates

#### Comments

- Manufactured of pure silicone with or without PTFE coating
- The footprint permits plates to be securely stacked without robotic arm interference
- Eliminates cross contamination of samples
- Dry heat autoclavable with excellent chemical compatibility, withstand low temperature to -80°C
- Resists coring and tearing
- Superior resealability after multiple injections
- Available pre-slit for easy penetration and reduced vacuum formation



## Well plates and mats Continued

Performance Level 2 for high-throughput applications

### WebSeal mats, non-sterile Continued

For certified well plates with 7 mm round well cavities, 8 mm square wells or 384 plates

Description	Color	Material	Well design	Pre-slit	Cat. no.	Pack size
WebSeal mats (alcohol resistant), round well		EVA	96 round well, 7 mm diameter		03255001	100
			96 round well – flat base, 5.6 mm diameter, cross	No	60180M210	50
WebSeal CLR silicone mat, round well			96 round well – flat base, 7 mm diameter, large penetration area		03255000	5
			96 round well – 7 mm diameter, step, small penetration area	Yes	03252162	
					03252164	
					03252163	
WebSeal CLR silicone mat, square well	Clear	Silicone	96 square well – flat base, 8 mm diameter, flat base with cross	No	60180M185	50
					03252436	5
			96 square well – flat base, 8 mm diameter, large penetration area	Yes	03252437	
				No	03252438	
			384 square well for 384 well plates	Yes	03252439	
			384 square well, flat base with cross for 384 microtiter plates	No	60180M186	50
WebSeal mat (solvent resistant), round well			96 round well – flat base, step, 7 mm diameter	Yes	03252170	
WebSeal mat, (solvent resistant), square well	Blue	Silicone/PTFE	96 square well – flat base, 8 mm diameter, large penetration area	No	03252173	5
				Yes	03252174	
			384 square well for 384 well plates	No	03252175	
				Yes	03252176	
WebSeal mat for Plate+			96 round well – dome base, 7.2 mm diameter	No	03252169	
				Yes	03252172	

# WebSeal Performance level 3 products



## Well plates and mats

Performance level 3 for high performance analysis

### WebSeal Plate+ plates

Glass coated microplates

#### Description

- High quality polypropylene microplates coated with 200nm thick layer of silicon dioxide
- Plate+ provides microplates with a chemical resistance similar to glass while retaining the advantages of polypropylene
- Cost-effective alternative to inserted glass vials
- Excellent for applications where plastic microplates are not applicable
- Plate+ is chemically and thermally resistant and will tolerate temperatures from -80° C to +80° C
- Lightweight, precision molded, cost-effective alternative to solid glass plates



Description	Total height	Well format	Total volume (µL)	Working volume (µL)	Cat. no.	Pack size
96 well microplate, round well	14.7	U-shape, 7.0 mm diameter	300	250	3253923	10
		V-shape, 7.0 mm diameter	220	190	3253924	10
		Flat bottom, 7.0 mm diameter	370	300	3253926	10
96 well mid height plate, round well	14.6	V-shape, 7 mm diameter	220	190	3253925	100
	26.5	U-shape, 8 mm diameter	1100	50 to 900	3253934	10
	33	U-shape, 7 mm diameter	1100	50 to 900	3253932	10
	40.6	U-shape, 7.2 mm diameter	1.2 mL	1.0 mL	3253927	10
96 deep well plate, square well	14.4	V-shape, 8 mm diameter	145	100	3253930	100
	43.7	V-shape, 8 mm diameter	2.4 mL	2.0 mL	3253928	10
384 well microplate	15.0	Square-rounded, flat, micro titer plate	120	90	3253929	10
	22.0	Square-rounded, U-shape, deep well plate	240	180	3253931	6



## Well plates and mats Continued

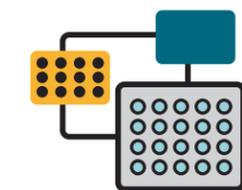
Performance Level 3 for high performance analysis

### WebSeal glass inserted plate kits

With 96-position mats

#### Comments

- Convenient wellplate kits with pre-assembled glass vials
- Replacement parts for kits available separatel
- Unique cutting tool allows removal of individual samples with the seal in place, eliminating cross contamination
- Mats with solid plugs are used for sample storage





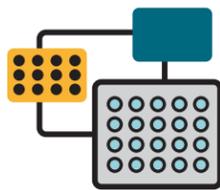
# Well plates and mats Continued

Performance Level 3 for high performance analysis

## WebSeal glass inserted plate kits Continued

With 96-position mats

Kit type	Vial material	Total volume (µL)	Vial dimension (mm)	Profile	Mat material	Total height (mm)	Vial cat. no.	Mat cat. no.	Kit cat. no.	Pack size
96 well small volume microplate with sealing mat	Clear glass	500	6.5 x 31	Taper	Silicone/PTFE	32.0	60105400	60105407	03252191	5
		700	6.5 x 41.4			44.0	60105401	60105407	03252192	
96 well small volume microplate with sealing mat and cutting tool	Clear glass	1100	7.45 x 38.5	Round	Silicone/PTFE	41.5	60105403	60105409	60105403	5
		1500	7.25 x 60.5			64.5	03252196	60105409	03252196	
96 deep well plate with sealing mat	Clear glass				Silicone/PTFE	47.3	—	03252170	03252197	
96 square well plate with sealing mat		1000	7.6 x 45	Constricted						1
96 square well plate with sealing mat					Precut	47.3	—	03252171	03252198	

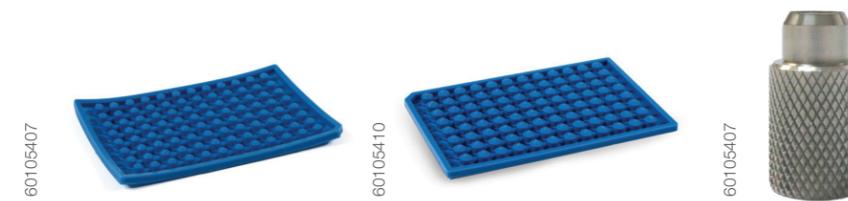


# WebSeal kit accessories

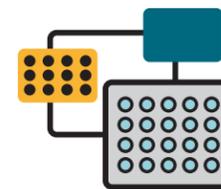


## WebSeal kit accessories

### WebSeal 96 well mats Silicone/PTFE



Kit type	Details	Pre-slit	Cat. no.	Pack size
96 well WebSeal mat	60180K100, 60180K101, 60180K103	No	60105407	5
		Yes	60105408	
96 well WebSeal mat	60180K104, 60180K106	No	60105409	5
		Yes	60105410	
96 well WebSeal mat, wellled plugs	60180K107, 60180K108	No	03252170	1
		Yes	03252171	
WebSeal cutter for vial removal	—	—	03050597	1





## Plate vials For 96 wells



Kit type	Vial material	Total volume (μL)	Vial dimension (mm)	Profile	Cat. no.	Pack size
Micro titer plate vial for 96 wells	Clear glass	500	6.5 x 31	Taper	60105400	500
		700	6.5 x 41.4		60105401	
		1100	7.45 x 38.5		60105403	
Deep well plate vial for 96 wells	Clear glass	1500	7.25 x 60.5	Round	60105405	



## Well plates and racks PP



Kit type	Vial material	Total volume (μL)	Profile	Total height (mm)	Cat. no.	Pack of
Plastic 96 round well micro titer plate (60180-K100)	—	800	V-shape, 7 mm diameter	31.5	60105414	5
PP 96 round well micro rack (60180-K101, K102)	PP	—	U-shape, 7 mm diameter	41.6	03252154	1
PP 96 well square well plate (60180-K107/108/109)	PP	2000	U-shape, square	44.0	60105417	1
PP 96 well square well plate (60180-K106)			V-shape, square		03252156	5

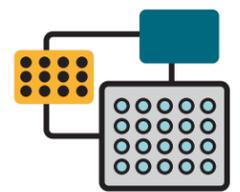
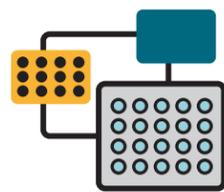
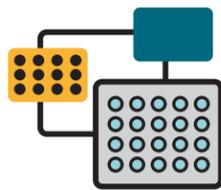




Plate vials and accessories  
For 96 wells



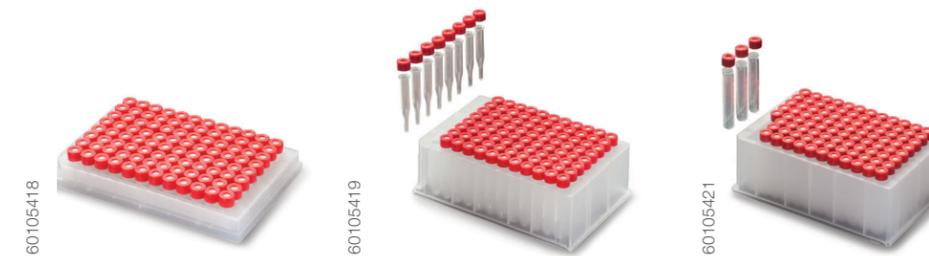
Kit type	Vial material	Total volume (µL)	Vial dimension (mm)	Profile	Septum	Cat. no.	Pack of
Deep well plate vial for 96 wells	Clear glass	350	6 x 42.5	Taper	—	60105424	960
Square well vial for 96 wells	Clear glass	1000	7.6 x 45.9	Round	—	60105425	960
PE cap, red, center hole for 96 well plate inserts	—	—	—	—	Silicone/PTFE, pre-slit, 45°	60105427	96
Micro-tube-rack-system, PP, 96 positions	—	—	—	—	—	60105432	96



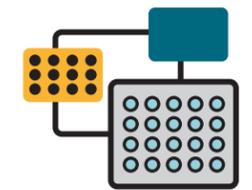
WebSeal clear glass inserted plate kits  
With individual closures

Comments

- 96 position block systems with glass inserts are used when the pure PP block is not inert enough
- Inserts manufactured from clear, Type 1 Class A or amber, Type 1 Class B borosilicate glass
- Inserts are sealed individually with a PE Cap Seal and can be easily removed and used externally without risk of losing sample
- The products can be obtained as individual components or as completely assembled, ready-to-use convenience blocks



Kit type	Total volume (µL)	Vial dimension (mm)	Profile	Septum	Vial cat. no.	Cap cat. no.	Kit cat. no.	Pack size
96 well microplate	100	5.7 x 15.5	Flat bottom	Silicone/PTFE, pre-slit, 45°	60105423	—	60105418	—
96 deep well Plate	350	6 x 42.5	Taper	Silicone/PTFE, pre-slit, 45°	60105424	60105427	60105419	1
96 square well plate	1000	7.6 x 45.9	Round	Silicone/PTFE, pre-slit, 45°	60105425	—	60105420 60105421	—





## Barcoded well plates

For Thermo Scientific™ Vanquish™ Systems

### Comments

- These well plates provide advanced sample security and sample integrity.
- This secure choice offers a tested portfolio for chromatography applications
- Barcoded well plates have an assured plate fit and a pre-applied orientation barcode in the correct reader position; therefore there is no risk of placing the plate incorrectly
- The secured side orientation in the autosampler alleviates the risk of starting the sequence in the wrong plate orientation
- The instrument controls plate orientation and verifies the plate before implementing the sequence

03255014

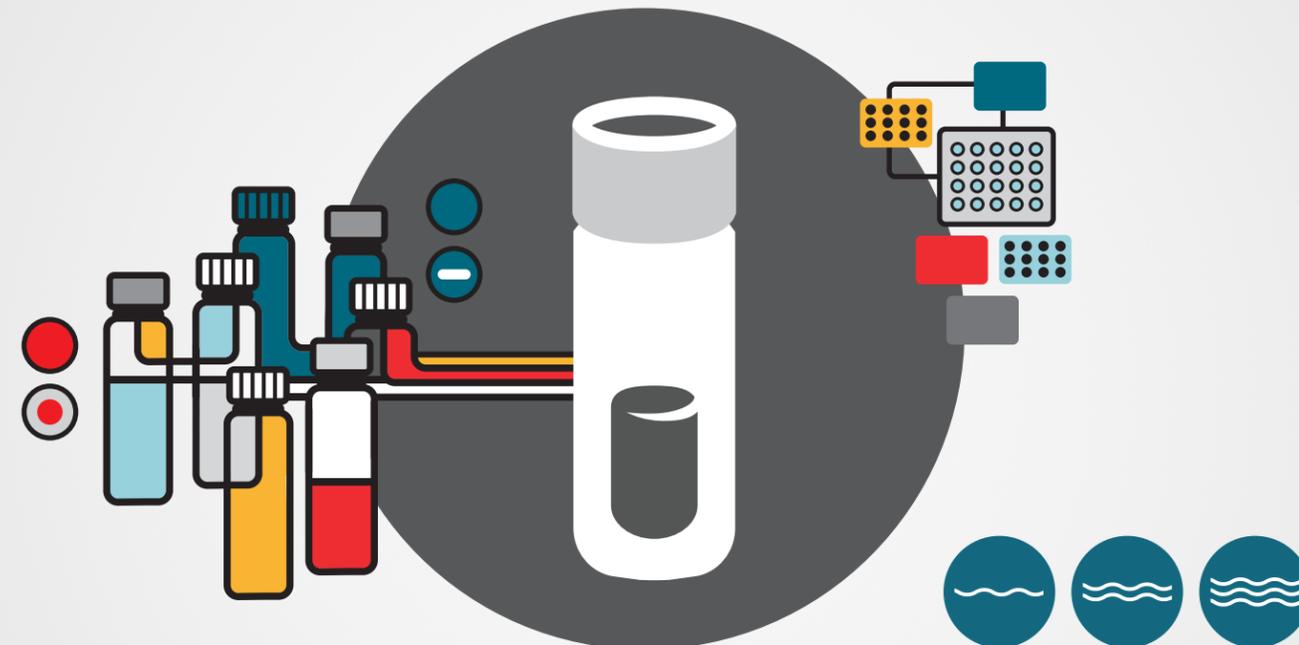


03255015



Description	Total height	Well format	Total volume μL/well	Working volume range μL/well	Cat. no.	Pack size
96 well microplate, round well, barcoded	14.7	U-shape, 7 mm diameter	270	10-250	03255010	100
					03255014	10
		V-shape, 7 mm diameter	220	10-190	03251447	100
96 well mid height plate, round well, barcoded	31.6	U-shape, 8 mm diameter	1300	50-1000	03255002	5
					03255005	50
	41.6	U-shape, 7 mm diameter	1000	50-900	03255008	50
96 deep well plate, square well, barcoded	44.0	V-shape, square	2000	50-1900	03255012	5
					03255003	5
					03255006	50

For mats see previous pages with mats for 7 or 8 mm cavity diameter



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