

Sample Vial (Chromatography Vial & Headspace Vial)

Chromatography vials and headspace vials are indispensable tools for modern analytical laboratories. Designed to meet the highest standards of quality and performance, these vials ensure accurate and reliable results across a wide range of applications. Whether you're analyzing liquid samples or volatile compounds, our vials are engineered to deliver exceptional performance every time.

Chromatography Vials: Primarily used for liquid sample analysis in techniques such as High-Performance Liquid Chromatography (HPLC), Gas Chromatography (GC), and Mass Spectrometry (MS). They are designed to hold liquid samples directly for injection into chromatographic systems.

Headspace Vials: Specifically designed for headspace sampling, used to analyze volatile and semi-volatile compounds. Samples are heated in the vial, allowing volatile components to evaporate into the headspace for gas-phase analysis.



Selection Suggestion

Features	Application
8-425 Screw Thread	Suitable for Japanese HPLC instrument, such as Shimadzu, Hitachi
9-425 Screw Thread	Most common in Agilent
11mm Crimp Top	Excellent seal.GC
11mm snap Top	Suitable for power sample, not for liquid transportation

Chromatography Vials Cap Selection

Type	Features
Snap Cap	<ul style="list-style-type: none"> ◆ Material: Typically made of polypropylene or other plastics. ◆ Sealing Mechanism: Snap-on design for quick and easy use. ◆ Compatibility: Suitable for less demanding applications.
Screw Cap	<ul style="list-style-type: none"> ◆ Material: Typically made of polypropylene with PTFE/silicone septa. ◆ Sealing Mechanism: Threaded design for easy manual or automated opening and closing. ◆ Compatibility: Suitable for most HPLC, GC, and MS applications.
Crimp Cap	<ul style="list-style-type: none"> ◆ Material: Usually aluminum with PTFE/silicone or PTFE/butyl rubber septa. ◆ Sealing Mechanism: Requires a crimper tool to create a tight, secure seal. ◆ Compatibility: Ideal for high-pressure or high-temperature conditions.



Screw Cap



Snap Cap



Crimp Cap

Septum Chemical Compatibility

	PTFE	PTFE/ silicone rubber	PTFE/ silicone rubber / PTFE	PTFE/ Red rubber	Fluororubber	PTFE/ Butyl rubber
Acetonitrile	✓	✓	✓	✓		✓
Hydrocarbons (hexane, heptane, methane)	✓		✓	✓	✓	
Carbinol	✓	✓	✓	✓		✓
Benzene	✓		✓		✓	
THF	✓		✓			
Toluene	✓		✓			
DMF	✓	✓	✓			✓
DMSO	✓	✓	✓			✓
Ethyl ether	✓	✓	✓			
Chlorinated solvent	✓		✓		✓	
Ethyl alcohol	✓	✓	✓	✓	✓	✓
Acetic acid	✓	✓	✓			✓
Acetone	✓	✓	✓			
Phenol	✓	✓	✓		✓	✓
Cyclohexane	✓		✓	✓	✓	

Septum Material Specifications

	Thin PTFE	PTFE/Silicone	PTFE/ Silicone/ PTFE	PTFE/ Red Rubber	Viton	Butyl
Temperature range	Up to 260°C	-40°C to 200°C	-40°C to 200°C	-40°C to 90°C	-40°C to 260°C	-50°C to 150°C
Use for multiple injections	No	Yes	Yes	No	No	No
Price	Very economical	Economical	Most expensive	Very economical	Economical	Economical
Resistance to coring	None	Excellent	Excellent	None	None	None
Recommended for storage	No	Yes	Yes	No	No	No
Best for	Superior chemical inertness. short cycle times and single injections	Most common HPLC and GC analyses, not as resistant to coring as P/S/P	Superior performance for ultra trace analysis, repeat injections, internal standards	Chlorosilanes, more economical option for single injections	Chlorinated solvents, higher temperatures	Organic solvents, acetic acids, impermeable to gases

Septum Selection

Septa	Advantages
PTFE	<ul style="list-style-type: none"> ◆ Strong chemical inertness ◆ Single injection ◆ Not suitable for storage before or after sampling ◆ Not suitable for volatile sample
PTFE/Silicon	<ul style="list-style-type: none"> ◆ Multiple injection ◆ Suitable for storage sample ◆ Most Common HPLC/GC analysis, repeat injections, suitable for volatile sample
Pre-slit PTFE/Silicon	<ul style="list-style-type: none"> ◆ Avoid curving ◆ Avoid Vacuum Generation ◆ Not suitable for volatile sample and repeat injections ◆ Strongly recommend to be used with slim Syringe Needle, such as Shimadzu, Hitachi, etc



Ordering information

Part No.	Description	Package
PGT001	2ml 9-425, Clear Screw Thread Vial w/Numbered Marking ID Patch {12x32mm}	100 pcs/pack, 50 packs/case
PGT002	2ml 9-425, Amber Screw Thread Vial w/Numbered Marking ID Patch {12x32mm}	100 pcs/pack, 50 packs/case
PGT003	Blue 9-425 Open Top Ribbed Screw Cap with 9mm Red PTFE/White Silicone Septa 1mm Thick	100 pcs/pack, 400 packs/case
PGT004	Blue 9-425 Open Top Ribbed Screw Cap Bonded with 9mm Red PTFE/White Silicone Septa 1mm Thick	100 pcs/pack, 400 packs/case
PGT005	Blue 9-425 Open Top Ribbed Screw Cap with 9mm Red PTFE/White Silicone Septa 1mm Thick PRE-SLIT	100 pcs/pack, 400 packs/case
PGT006	Blue 9-425 Open Top Ribbed Screw Cap Bonded with 9mm Red PTFE/White Silicone Septa 1mm Thick PRE-SLIT	100 pcs/pack, 400 packs/case
PGT007	40mL Clear VOA Vial Assembled w/24-414 Open Top (2pc) T/S Septa Cap	72 pcs/pack, 10 packs/case
PGT008	40ml Amber VOA Vial Assembled w/24-414 Open Top (2pc) T/S Septa Cap	72 pcs/pack, 10 packs/case
PGT009	60ml Clear VOA Vial Assembled w/Open Top (2pc)T/S Septa Cap, Shrink Wrap w/cover	100 pcs/pack, 6 packs/case
PGT010	60ml Amber VOA Vial Assembled w/Open Top (2pc)T/S Septa Cap, Shrink Wrap w/cover	100 pcs/pack, 6 packs/case
PGT012	18mm Silver Color Open Top Metal Cap (8mm hole) with 17.5mm Natural PTFE/Blue Transparent Silicone Septa 1.5mm Thick (UltraClean)	100 pcs/pack, 100 packs/case
PGT013	20mm Open Top Aluminum Crimp Cap (10mm hole) with 20mm Natural PTFE/Natural Silicone Septa 3mm Thick	100 pcs/pack, 100 packs/case
PGT014	20ml Clear Glass Screw Headspace Vial 22.5*75mm	100 pcs/pack, 8 packs/case
PGT015	2ml Clear Glass Flat Base 11mm Crimp Vial Wide Opening with Label	100 pcs/pack, 50 packs/case
PGT016	Silver 11mm Open Top Crimp Cap with Red PTFE/ White Silicone Septa 1mm Thick	100 pcs/pack, 400 packs/case
PGT017	Silver 11mm Open Top Crimp Cap with Transparent TEF/Natural Rubber red-orange Septa 1mm Thick	100 pcs/pack, 400 packs/case

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