

## SAMPLE VIALS

### Introduction

Membrane Solutions® HPLC GC Sample Vials are made to Type 1 purity standards using either 33-Expansion Borosilicate Glass (clear) or 51-Expansion Glass (clear and amber). To ensure consistency and reliability, these vials undergo a state-of-the-art quality control regimen throughout the entire manufacturing process by utilizing a computerized camera system to precisely measure all critical dimensions.

Membrane Solutions offers a wide variety of caps, septa and sample vials to meet most laboratory needs and purity requirements.



### Features and Benefits

- Compatible with a wide range of HPLC, LC/MS and GC Instruments
- Pre-packed combo including 100 vials and caps for ease and convenience in ordering
- Vials and caps and septa also available separately

### Vial Closures Guidance

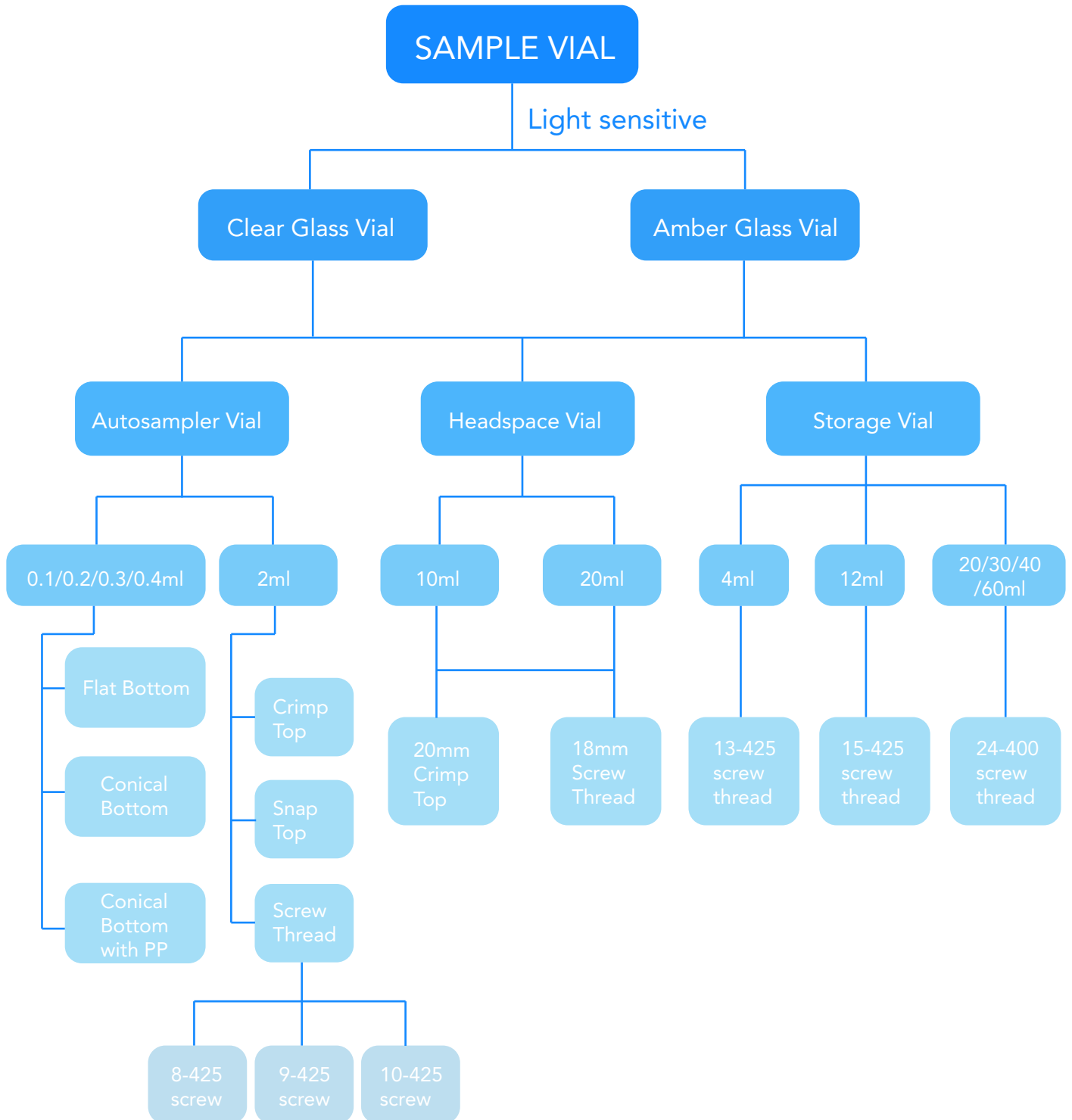
Cap Type	Seal	Comments	Temperature range
Crimp (Aluminum Cap)	Excellent seal	Require a tool	-60°C to 300°C
Snap (PP cap)	Moderate seal	Fast, no tools, some cap racking	-20°C to 100°C
Screw (PP cap)	Excellent seal	Universal	-20°C to 100°C

### Septa Selection Guidance

Septa Type	Use for multiple injections	Temperature range	Recommended for storage	Best for
PTFE	No	260°C	No	High temperature headspace application
PTFE/Silicon	Yes	-40°C to 200°C	Yes	Most HPLC/GC application, not suitable for chlorosilanes
PTFE/Silicon/PTFE	Yes	-40°C to 200°C	Yes	Wide chemical compatibility
PTFE/Rubber	No	-40°C to 90°C	No	Moderate resealability. Not recommended for holding samples for further analysis

### Instrument Chart

Brand	Instrument/Model #	8-425 Screw-Top	9-425 Screw-Top	10-425 Screw-Top	11mm Crimp-Top	13-425 Screw-Top	Headspace
Agilent	Headspace (HS: 6, 10, 20 mL, Flat)						●
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6850, 6890, 7670A, 671A, 7672, 7673A/B, 7683, 7890, 8042		●		●		
Beckman	501, 502, 507	●		●			
Bruker	LC51					●	
Bruker /Varian	8100/8200	●	●	●	●		
	Genesis (HS: 10, 20 mL Rounded)						●
	Marathon		●		●		
	8035, 8000 Series, 8055, 8085, 3800 GC	●					
	9100/9090/9095	●			●		
Bruker/ Varian /Rainin	Dynamax AI-IA, AI-200, Dynamax AI-3				●		
	Dynamax AI-3AI-IA, AI-2W	●					
Shimadzu	AOC14/1400	●	●			●	
	AOC20i			●	●		
	AOC-14/1400, AOC-17	●					
	AOC-20		●		●	●	
	AOC 88/9	●	●				
	AOC-5000	●	●				
	HSS-2B/4B						●
	LC 2010	●	●				
PerkinElmer	Autosystem GC/XL/AS-2000	●	●		●	●	
	AI-1		●		●		
	Clarus 500/600		●		●		
	HS16/40						●
	Integral 4000	●	●		●		
	ISS-100/200	●	●		●		
	LC 600 42 vial tray		●				
	LC Plus	●	●			●	
	Autosystem GC (HS: 10, 20 mL, Rounded)	●			●		●
	F40, F45, HS 6, HS 40 (HS: 10, 20 mL, Rounded)				●		●
Integral 4000 (HS: 10, 20 mL, Rounded)				●		●	
TurboMatrix 40/110						●	
Waters	717 Plus				●		
	Acquity	●	●		●		
	Alliance 2690	●	●	●	●		
	CapLC	●	●				
	48-pos. M700					●	
	WISP				●		



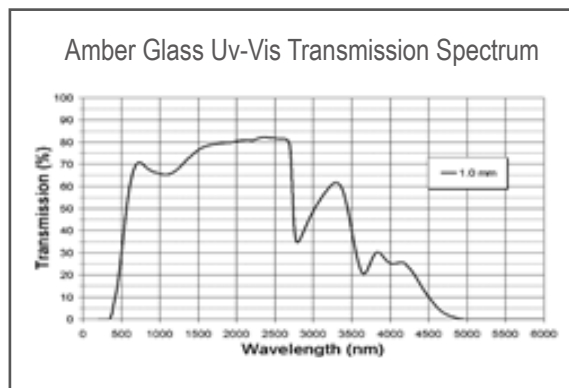
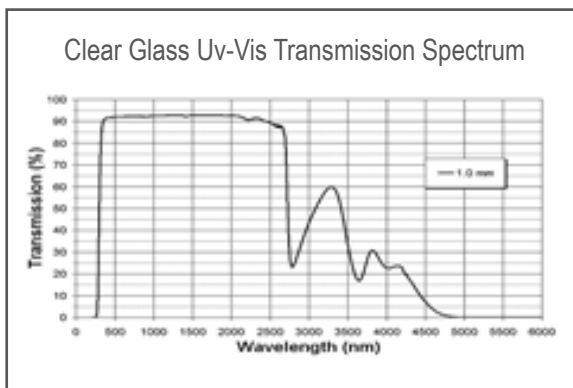
### Typical Glass Composition

Different glass types contain different proportions of oxides to give characteristics such as color and different expansion coefficients.

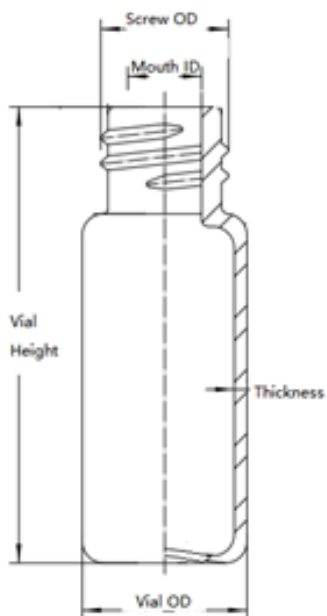
Chemical		SiO <sub>2</sub>	B <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	Na <sub>2</sub> O	K <sub>2</sub> O	BaO	CaO
Composition (main components in approx. weight %)	Amber Tube	70	7	6	1	5	7	1	2	<1
	Clear Tube	75	10.5	5	-	-	7	-	-	1.5

### Light Transmission

The choice of clear or amber glass may also be made in order to deal with the exposure of sample to incident UV-Vis light.



### Optical Test



Dimension	9-425 Screw Vial Standards
Volume	2ml
Vial OD	11.6±0.2mm
Mouth ID	6.0±0.20mm
Vial Height	32.0±0.50mm
Screw OD	9.4±0.25mm

## 2ml Auto-sample Vial, Cap & Septa

### Introduction

Membrane Solutions 2mL Auto-sampler Vials, Cap and Septa are compatible with most common HPLC/GC instruments, e.g. Thermo, Agilent, Shimadzu, Varian, Gilson, Jasco, Waters, CTC, Dani, etc.

Membrane Solutions cap septa are specially formulated and constructed to provide optimum system performance with minimal coring and superior chemical inertness. The softness or hardness is matched to the instrument and designed to work well with syringes and samples.



Design the Neck	Volume	Type of Glass	Dimension
8-425	2mL	Type I , 33 expansion glass(Clear) Type I , 51 expansion glass(Amber)	32 * 11.6 mm
9-425			
Crimp top			
Snap top			



Type of Caps	Material	Type of Septa
8-425	Polyethylene	1.Pre-slit Blue PTFE/White Silicone Septa 2.Red PTFE/White Silicone Septa 3.White PTFE/Red Silicone Septa
9-425		
Crimp top	Aluminum	
Snap top	Polyethylene	

## Auto-Sample Vial Ordering Information

Part No.	Description	Qty / Pk
<b>Combo Packing</b>		
SV032C012CRS	2ml Clear vial 8-425 screw top graduated with write-on spot + White PTFE/Red silicone septa + Black screw cap with hole	100pcs
SV032A012CRS	2ml Amber vial 8-425 screw top graduated with write-on spot + White PTFE/Red silicone septa + Black screw cap with hole	100pcs
SV022C002CRS	2ml Clear vial 9-425 screw top graduated with write-on spot + White PTFE/Red silicone septa + Blue screw cap with hole	100pcs
SV022A002CRS	2ml Amber vial 9-425 screw top graduated with write-on spot + White PTFE/Red silicone septa + Blue screw cap with hole	100pcs
<b>2mL Screw Top Vial</b>		
LBSV012C	2ml Clear vial, 8-425 screw top	100pcs
LBSV002C	2ml Clear vial, 9-425 screw top	100pcs
LBSV082C	2ml Clear vial, 10-425 screw top	100pcs
LBSV012A	2ml Amber vial, 8-425 screw top	100pcs
LBSV002A	2ml Amber vial, 9-425 screw top	100pcs
LBSV082A	2ml Amber vial, 10-425 screw top	100pcs
LBSV032C	2ml Clear vial, 8-425 screw top, graduated with write-on spot	100pcs
LBSV022C	2ml Clear vial, 9-425 screw top, graduated with write-on spot	100pcs
LBSV092C	2ml Clear vial, 10-425 screw top, graduated with write-on spot	100pcs
LBSV032A	2ml Amber vial, 8-425 screw top, graduated with write-on spot	100pcs
LBSV022A	2ml Amber vial, 9-425 screw top, graduated with write-on spot	100pcs
LBSV092A	2ml Amber vial, 10-425 screw top, graduated with write-on spot	100pcs
<b>2mL Crimp Top Vial</b>		
LBSV042C	2ml Clear vial, 11mm crimp top	100pcs
LBSV042A	2ml Amber vial, 11mm crimp top	100pcs
LBSV062C	2ml Clear vial, 11mm crimp top, graduated with write-on spot	100pcs
LBSV062A	2ml Amber vial, 11mm crimp top, graduated with write-on spot	100pcs
<b>2mL Snap Top Vial</b>		
LBSV052C	2ml Clear vial, snap top	100pcs
LBSV052A	2ml Amber vial, snap top	100pcs
LBSV072C	2ml Clear vial, snap top, graduated with write-on spot	100pcs
LBSV072A	2ml Amber vial, snap top, graduated with write-on spot	100pcs

## Caps & Septa Ordering Information

Part No.	Description	Qty / Pk
LBSV221CSS	Pre-slit Blue PTFE/White silicone septa+ Black screw cap with hole, for 2ml 8-425 screw top vial	100pcs
LBSV232CSS	Pre-slit Red PTFE/White silicone septa+ Black screw cap with hole, for 2ml 8-425 screw top vial	100pcs
LBSV222CSB	Pre-slit Blue screw cap with hole with bonded Blue PTFE/White silicone septa, for 2ml 9-425 screw vial	100pcs
LBSV222CSS	Pre-slit Blue PTFE/White silicone septa+ Blue screw cap with hole, for 2ml 9-425 screw vial	100pcs
LBSV224CSB	Cross-slit Blue screw cap with hole with bonded Blue PTFE/White silicone septa, for 2ml 9-425 screw vial	100pcs
LBSV224CSS	Cross-slit Blue PTFE/White silicone septa+ Blue screw cap with hole, for 2ml 9-425 screw vial	100pcs
LBSV083CSS	Pre-slit Blue PTFE/White silicone septa + Black screw cap with hole, for 2ml 10-425 screw top vial	100pcs
LBSV084CSS	Pre-slit Red PTFE/White silicone septa + Black screw cap with hole, for 2ml 10-425 screw top vial	100pcs
LBSV112CRS	White PTFE/Red silicone septa + Aluminum cap with hole, for 2ml crimp top vial	100pcs
LBSV122CRS	Red PTFE/White silicone septa + Aluminum cap with hole, for 2ml crimp top vial	100pcs
LBSV212CRS	Pre-slit White PTFE/red silicone septa+ Aluminum cap, for 2ml crimp top vial	100pcs
LBSV222CRS	Pre-slit Red PTFE/white silicone septa + Aluminum cap, for 2ml crimp top vial	100pcs
LBSV202CSS	White PTFE/Red silicone septa + snap cap with hole, for 2ml snap top vial	100pcs
LBSV302CSS	Red PTFE/White silicone septa + snap cap with hole, for 2ml snap top vial	100pcs
LBSV212CSS	Pre-slit White PTFE/Red silicone septa + snap cap with hole, for 2ml snap top vial	100pcs
LBSV242CSS	Pre-slit Red PTFE/white silicone septa + snap cap with hole, for 2ml snap top vial	100pcs