

The Chromacol SCI-VI™ System Microsampling Vials and Sleeves

SCI-VI™

This patented system gives the chromatography user the ability to inject reproducibly from glass vials with total volumes down to 100µL in a full range of autosampler instruments. In combination with some optimization of the chromatography process it allows manipulation of sample volume down to the nanoliter level in conventional autosampler units.

Glass Deactivation

The clear vials are manufactured from Chromacol GOLD™ glass, a low expansion high purity glass with an extremely low concentration of active sites. This gives a low activity surface with high recovery of basic and polar samples that may show adsorption on more typical glass surfaces.

	SiO ₂	B ₂ O ₃	TiO ₂	K ₂ O	Al ₂ O ₃	Fe ₂ O ₃	Na ₂ O	BaO	CaO
Borosilicate-Clear	75	10.5			5		7	1	1.5
Borosilicate-Amber	70	7	5	1	6	1	7	2	1
Neutral Borosilicate-Gold Grade™	80.6	13			2.3		4		

Vials

There are three volumes of vial available within the SCI-VI system. All have a 8mm crimp top closure, which is compatible with a wide range of standard aluminium crimp caps and liners. The lowest volume commercially available glass vial is the 100µL 01-CVG.

- **01-CVG** This has a smaller inner diameter than the other vials in the series but has a precision conical lead-in that directs the autosampler needle into the low volume reservoir. With a total volume of only 100µL this is a true microsampling product, with applications where sample volumes are limited by cost or availability. Due to the small diameter care should be taken when using wider gauge needles, not just because of the physical fit but also due to the displacement of sample by the body of the needle itself.
- **02-CTVG and 02-CTV(A)** With a useable volume of 200µL and with a precision conical taper this vial is also available in amber glass as the 02-CTV(A). The conical taper gives a residual volume of less than 1µL. This may be used in place of conventional inserts where the sample integrity need to be retained within the single vial.
- **03-CVG** With a useable volume of 300µL and a residual volume of less than 2µL the round base allows sample concentration within the vial.

Caps and Seals

- 8mm aluminium crimp caps available in a range of colours.
- Seals are pre-inserted and are available in natural rubber, silicone rubber, PTFE and Viton™
- PE snap caps for convenient closure without crimping tools.





Product Brief

Autosampler Compatibility

At the heart of the SCI-VI™ system is the range of precision-machined sleeves that allow the vials to be used in the vast majority of commercial autosamplers. The sleeves are re-usable and support the crimped, sealed vials in the correct position within both the autosampler carousel or racks but also allow movement of the vials as a unit to injection positions in both GC and HPLC autosamplers.

- Vials are 6mm x 32mm and use standard 8mm crimp caps. For compatibility with most autosamplers the vials are supported in sleeves that give outside dimensions of a standard 12mm x 32mm autosampler vial.

Routine Applications

- The SV-S1 allows the vials to be used in most HPLC and GC autosamplers with fixed racks or rotating carousels.
- The SV-S11A is used by the majority of **Agilent Technologies** HPLC products including the HP1050, HP1100 and 1200 standard autosamplers.

SV-S1



SV-S11A



Special Instrument Applications

- The SV-S11G is a glass version of the SV-S11A giving visibility of the contents and compatibility with **Agilent Technologies** systems.
- The SV-S12A allows the use in the cap support racks utilized in autosamplers from Japanese manufactures such as **Jasco and Shimadzu**. Here the top of the vial is held with the base exposed.
- The SV-S15 allows operation in the 48-position carousel of the **Waters WISP** and Model 717 autosampler modules, or other instruments where 4mL vials are used as a standard sampling vial.
- The SV-S2 gives an 8mm od making it compatible with high capacity racks from **Waters and Beckman**
- The SV-S14 is used for operation in **Agilent 7683** and related series GC autosamplers.

SV-S11G



SV-S12A



SV-S15



SV-S2



Vials Only

The SCI-VI™ vials themselves can be used without sleeves in high capacity racks used in Agilent 1100 modules, PE System 200 modules, Shimadzu SIL-10 and SIL 20A and Beckman System Gold modules.

96-position storage plates.

The 03-CVG and 02-CTVG can be used in combination with Chromacol's 96-position round well plates MTP-96 with standard SBS footprint.

Note that as the crimp head/cap supports the vial when it is suspended within the well, the needle depth setting will need to be modified to compensate for the higher vial position.

Deactivation

For further guarantee of recovery both the 03-CVG and 02-CTVG may be supplied with silanized glass versions. The 03-CVG-S is gas phase silanized with a monomeric C1 reactive silane effectively masking the remaining acidic sites responsible for non-specific base adsorption.

For samples and pricing please contact:-

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