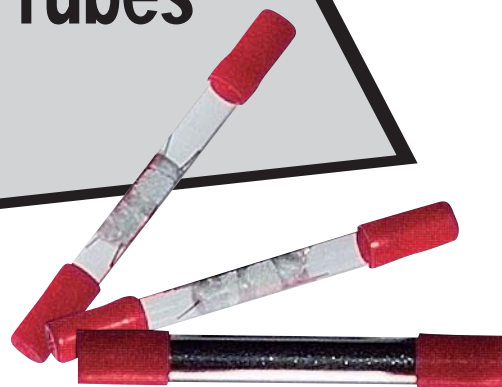


Thermal Desorption Sorbent Tubes

For (sub) ppb VOC Measurements



- High sensitivity
- High recovery
- Reusable

Thermal Desorption

SKC sorbent technology research has produced superior materials for the collection of organic compounds for thermal desorption.

Thermal desorption techniques offer the advantage of greatly improved analytical sensitivity. Because a solvent is not used, the collected sample is not diluted and, in most cases, analytical recovery is so close to 100% that desorption efficiency corrections are not required.

Sorbents

To be suitable for thermal desorption, sorbents must meet exacting specifications that include:

- Low contaminant background
- High thermal stability
- Sufficient adsorptive strength to retain components of interest, but release them quickly when heat is applied

Recent developments in sorbent technology have provided some superior materials for the collection of organic compounds for thermal desorption.

Anasorb® 747 (20/40 mesh size and 980 m²/gm surface area)

This beaded active carbon has the capacity for organic vapors similar to petroleum-based and coconut-shell charcoals. It also can be used to sample nonpolar organic compounds.

Anasorb GCB1 (20/40 mesh size and 100 m²/gm surface area)

Anasorb Graphitized Carbon Black 1 (GCB1) has a moderate surface area and is equivalent to Carbotrap® B (20/40) and Carbopack B (60/80). This sorbent has proven to be valuable for sampling compounds of intermediate to high volatility.

Anasorb GCB2 (20/40 mesh size and 10 m²/gm surface area)

This sorbent has a low surface area and is equivalent to Carbotrap C (20/40) and Carbopack C (60/80). Anasorb GCB2 is useful in collecting semi-volatile organic compounds (SVOCs).

Carbosieve S-III (60/80 mesh size and 975 m²/gm surface area)

This carbon-based molecular sieve has properties similar to the obsolete Anasorb CMS and replaces it in SKC thermal desorption tubes. Carbosieve S-III has a high capacity/breakthrough volume for small molecules and is moderately hydrophilic. It can be used for the lower boiling compounds such as halogenated hydrocarbons and alcohols.

Chromosorb® 106 (60/80 mesh size and 700 to 800 m²/gm surface area)

A porous polymer sorbent, Chromosorb 106 is used to trap low-boiling hydrocarbons, benzene, labile compounds, and volatile oxygenated compounds. This hydrophobic sorbent is the least polar polymer in the Chromosorb family and is functionally similar to Anasorb 727.

Tenax® TA (20/35 or 35/60 mesh size and 30 to 35 m²/gm surface area)

Tenax TA is a traditional sorbent (porous polymer) for trapping medium to high boiling compounds; it is especially useful for low concentrations because of its low background. Tenax TA is hydrophobic and is suitable for use in EPA Method TO-17 or IP-1B and other thermal desorption applications.

Tenax GR (20/35 mesh size and 35 m²/gm surface area)

This Tenax/graphite composite extends the range of Tenax to lower boiling compounds. It retains the ability of Tenax to be cleaned easily to a very low background and is widely used in thermal desorption applications.

Carbograph 5TD (20/40 mesh size and 560 m²/g surface area)

This is a medium strength sorbent for collecting hydrocarbons in the boiling point range of 50 to 150 C. It is hydrophobic and has low artifact formation.



Thermal Desorption Sorbent Tubes

Thermal Desorption Tube Selection

All SKC thermal desorption tubes are sealed with PTFE end caps and marked with a permanent serial number. When ordered, SKC thermal desorption tubes receive extensive thermal conditioning that remains valid for 30 days. Glass transport tubes and Swagelok® fittings are available as accessory items.

Perkin Elmer, Shimadzu, or Unity Thermal Desorber Tubes

Available in glass or stainless steel, these tubes measure 0.25-inch OD x 3.5-inch length (6.35-mm OD x 88.9-mm length).

Applications	Sorbent	SS or Glass	Cat. No.
ASTM D6196	Anasorb GCB1*	SS	226-356
		G	226-359
ASTM D6196 MDHS 72	Tenax TA	SS	226-357
		G	226-360
ASTM D6196 MDHS 72	Chromosorb 106	SS	226-358
		G	226-361
EPA TO-1, IP-1B	Tenax TA	SS	226-340
		G	226-339
EPA TO-2	Carbosieve S-III	SS	226-341
EPA TO-17	Anasorb GCB1*/Carbosieve S-III	SS	226-349
		G	226-346
EPA TO-17	Anasorb GCB2/Anasorb GCB1*/Carbosieve S-III	SS	226-350
		G	226-347
EPA TO-17	Tenax GR/Anasorb GCB1*	SS	226-348
		G	226-345
—	Carbograph 5	SS	226-362

Accessories

Description	Cat. No.
Glass Transport Tubes, for 3.5-inch (88.9-mm) length tubes, pk/5	226-300
Swagelok Fittings, for 0.25-inch (6.35-mm) OD tubes, set of 2	P50291
PTFE Ferrules, set of 2	P30121

* Anasorb GCB1 is equivalent to Carbotrap B.

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcinc.com/warranty.asp>.

