SKC Quality Sorbent Tubes

SKC on the Outside Means Quality on the Inside

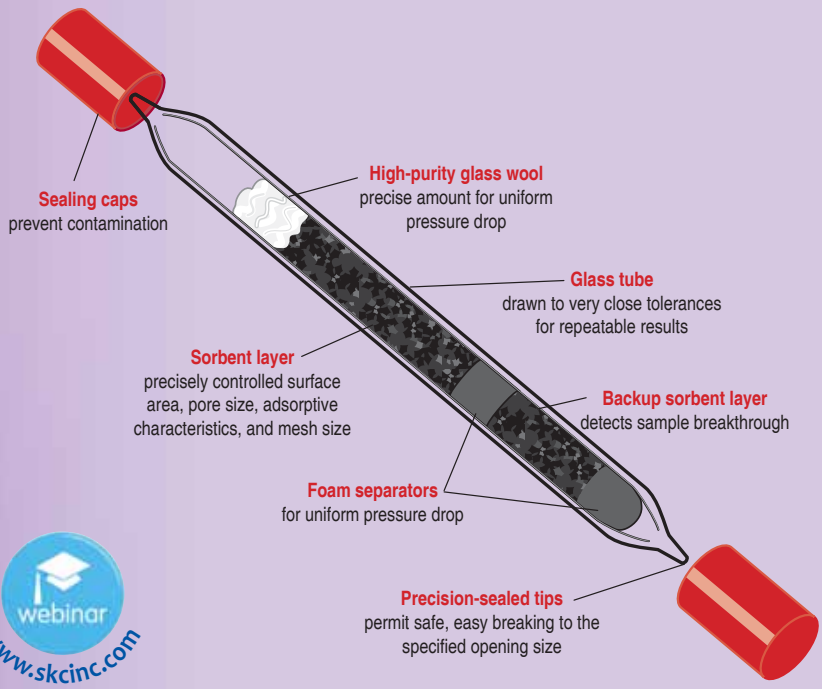
SKC was the first to bring the NIOSH sorbent tube design to the commercial market over 40 years ago.

SKC leads the way in sorbent tube research to make quality sorbent tubes available for protecting workers and public health.

Over 100 SKC Sorbent Tubes are available for standard and specialty applications. SKC also manufactures custom sorbent tubes to your specifications.

Look for the SKC name when choosing sorbent tubes. SKC brings to you over 40 years of expertise, the support of experienced technical professionals, low background sorbents, quality manufacturing, QC data online, repeatable performance, and accurate sampling.

- **Meet NIOSH and OSHA specifications**
- **High-quality, low-background sorbents**
- **SKC quality control ensures sorbents and tubes meet high standards**
  - Accurate sorbent weights
  - Consistent method-specified mesh size and separators
  - Tested for uniform back pressure
  - Accurate, repeatable results
- **Large batch production of Anasorb® CSC Lot 2000 charcoal to ensure availability for many years**
- **Backup sorbent layer for breakthrough indication**
- **Validation of reliability**
  - Specified in OSHA, NIOSH, and EPA methods
  - Used by health and safety professionals around the world for compliance and consulting
- **Sorbent background certification available online** *(see right)*



webinar
www.skcinc.com

Anasorb

A Trademark of Quality

In 1973, SKC made the first commercial sorbent tube. Since then, SKC has led advancements in sorbent tube technology. To more easily identify SKC proprietary sorbents in air sampling methods, the registered trademark, Anasorb, is used for SKC proprietary sorbents of all types.

Sorbent Equivalencies

Anasorb	Equivalent Sorbent
708	Chromosorb 108
727	Chromosorb 106
C300	Hydrar, Carulite
CSC	None
747	None
GCB1	Carbotrap B (20/40) Carbopack B (60/80)
GCB2	Carbotrap C (20/40) Carbopack C (60/80)

Seeing is Believing!

Visit www.skcinc.com/catalog/infopage.php?id=5200 to view Sorbent Background Certificates of Analysis.

For Sample Pumps
see pages 4-29

Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 143-211 or search the online Sampling Guide at www.skcinc.com for methods and required sorbent tubes.

Cat. No.	Sorbent *(treatment)*	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-01 226-01A 226-01-BULK	Anasorb CSC, Coconut Charcoal Anasorb CSC, Coconut Charcoal Anasorb CSC, Coconut Charcoal	6 x 70 6 x 70 6 x 70	2 2 2	100/50 100/50 100/50	GS GS GS	F F W F F W F F W	A A A	50 10 1000
226-01GWS	Anasorb CSC, Coconut Charcoal	6 x 70	2	100/50	GS	W W W	A	50
226-09 226-09-BULK	Anasorb CSC, Coconut Charcoal Anasorb CSC, Coconut Charcoal	8 x 110 8 x 110	2 2	400/200 400/200	GS GS	F W W F W W	B B	50 1000
226-09-02	Anasorb CSC, Coconut Charcoal	8 x 150	3	350/350/350	GS	W W W W	C	50
226-10	Silica Gel	6 x 70	2	150/75	GS	F W W	A	50
226-10-03	Silica Gel *(specially cleaned)*	7 x 110	2	400/200	GS	W W G W	B	50
226-10-04	Silica Gel	8 x 110	2	300/150	GS	W W W	B	50
226-10-06*	Silica Gel *(sulfuric acid)*	6 x 70	2	200/100	GS	W W W	A	50
226-15	Silica Gel	8 x 110	2	520/260	GS	F W W	B	50
226-15GWS	Silica Gel	8 x 110	2	520/260	GS	W W W	B	50
226-16	Anasorb CSC, Coconut Charcoal	10 x 110	2	800/200	GS	F W W	C	50
226-16-02	Anasorb CSC, Coconut Charcoal	10 x 160	2	1800/200	GS	F W W	D	50
226-17-1A	Anasorb C300†	6 x 70	1	200	GS	W W	A	50
226-17-3A	Anasorb C300†	8 x 110	1	500	GS	W W	B	50
226-18	Alumina	8 x 110	2	400/200	GS	F W W	B	50
226-22	Silica Gel	10 x 110	2	1040/260	GS	F W W	C	50
226-23*	XAD-2 *(octanoic acid)*	6 x 70	2	100/50	GS	W W W	A	50
226-25	Anasorb CSC, Coconut Charcoal Anasorb CSC, Coconut Charcoal	8 x 110 8 x 110	1 1	400 200	GS	W W W W	D	50 sets
226-27◊	XAD-2 *(2-hydroxymethyl piperidine)*	8 x 110	2	450/225	GS	W W W	B	20
226-28	Soda Lime	7 x 110	2	600/200	GS	W W W G W	B	50
226-29*	Anasorb 747 *(sulfuric acid)*	8 x 110	2	500/250	GS	W W W	B	50
226-30	XAD-2	7 x 70	2	80/40	GS	W W W	B	50
226-3002A	XAD-2 XAD-2	10 x 110 10 x 110	1 1	600 300	GS	W W W W	D	10 sets
226-30-03	XAD-2	8 x 110	2	100/30	GS	W W W	B	50
226-30-04	XAD-2	8 x 110	2	100/50	GS	W W W	B	50
226-30-05	XAD-2	8 x 110	2	150/75	GS	W W W	B	50
226-30-06	XAD-2	8 x 110	2	400/200	GS	W W W	B	50
226-30-07◊	XAD-2 *(p-anisidine)*	8 x 110	2	100/50	GS	W W W	B	20
226-30-08	Anasorb 708	6 x 70	1	100	GS	W W	A	50
226-30-16* (OVS) 226-30-16A* (OVS)	XAD-2/Glass Fiber Filter XAD-2/Glass Fiber Filter	13→8 x 75 13→8 x 75	2 2	270/140 270/140	GO GO	F F G T F F G T	V V	10 50
226-30-18*	XAD-2 *(naphthylisothiocyanate)*	6 x 70	2	80/40	GS	W W W	A	50
226-35	Tenax TA	6 x 70	2	30/15	GS	F W W	A	50
226-35-01*	Tenax TA	6 x 70	2	20/10	GO	W W W	A	50
226-35-02*	Tenax TA Tenax TA	6 x 130 6 x 130	1 1	35 17	GO	W W W W	—	50 sets

* *Limited shelf-life; contact SKC for more information* † *Anasorb C300 is equivalent to Hydrar and Carulite.*
◊ *Limited shelf-life; refrigerator/freezer storage may be required. Contact SKC.*

***TUBE ENDS: GS:** Glass Sealed **GO:** Glass Open **SS:** Stainless Steel Open*
***SEPARATORS: W:** Glass Wool **G:** Glass Fiber Filter **F:** Foam **T:** PTFE Ring **S:** Screen **N:** Nylon Ring **Q:** Quartz Filter **R:** Glass Spacer*

For compliance sampling, use tubes as specified in a validated sampling method. It is the user's responsibility, employing a suitable method, to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use. The user should adjust the sampling parameters for specific conditions and evaluate tubes under conditions of use to ensure that the desired results will be obtained.

the SKC Advantage!

- ☑ **Produced the first commercial sorbent tube**
- ☑ **Over 40 years of proven performance!**
- ☑ **Validation and reliability** SKC tubes are specified and used by OSHA, NIOSH, EPA, and health and safety professionals around the globe for compliance and consulting.
- ☑ **High-quality, low-background sorbents**
- ☑ **Consistent method-specified mesh size and separators** maintain uniform back pressure and breakthrough volumes.
- ☑ **Large batch production** Anasorb CSC Lot 2000 charcoal will be available for many years.
- ☑ **Sorbent background certification available online**
- ☑ **Backup sorbent layer** for breakthrough indication
- ☑ **Technical backup** SKC technical experts provide fast, accurate answers to your questions.
- ☑ **Easy-off "hat" caps on specialty tubes**

For tube holders and accessories see pages 50-51

Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 143-211 or search the online Sampling Guide at www.skcinc.com for methods and required sorbent tubes.

Cat. No.	Sorbent *(treatment)*	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-35-03	Tenax TA	8 x 110	2	100/50	GS	W W W	B	50
226-35031	Tenax TA	8 x 110	2	100/50	GS	W W W	B	10
226-36	JXC Charcoal	8 x 150	2	630/315	GS	F W W	C	50
226-37	Anasorb CSC, Coconut Charcoal Anasorb CSC, Coconut Charcoal	8 x 110 8 x 110	1 1	400 200	GS	F W F W	D	50 sets
226-39	Florisil	6 x 70	2	100/50	GS	W W W	A	50
226-39-02	Florisil	8 x 110	2	400/200	GS	W W W	B	50
226-40◊	Oxidizer Molecular Sieve *(triethanolamine) (2 tubes)*	7 x 110 7 x 70 (2)	1 1	800 400 (2)	GS	W W W W	—	10 sets
226-40-02*	Molecular Sieve *(triethanolamine)*	7 x 110	2	400/200	GS	W W W	B	50
226-42*	Silica Gel *(sulfuric acid)*	8 x 110	2	200/200	GS	W W W	B	50
226-42-02*	Firebrick (gas chrom-R) *(sulfuric acid)*	7 x 70	1	300	GS	W W	B	50
226-44	Drying Tube	6 x 70	1	250	GS	W W	—	50
226-44-02	Drying Tube	10 x 160	1	900	GS	W W	—	50
226-47-01	Silica Gel	6 x 70	2	100/50	GS	W W W	A	50
226-48	Silica Gel	7 x 110	2	150/150	GS	W W W	B	50
226-49-102	Chromosorb 102	6 x 70	2	66/33	GS	W W W	A	50
226-49-106	Chromosorb 106	6 x 70	2	75/37	GS	W W W	A	50
226-49-108	Anasorb 708	6 x 70	2	75/37	GS	W W W	A	50
226-51	Silica Gel	6 x 70	2	100/50	GS	F W W	A	50
226-53*	Silica Gel *(sulfuric acid)*	6 x 70	2	150/75	GS	W W W	A	50
226-54◊	XAD-2 *(2-hydroxymethyl piperidine)*	6 x 70	2	45/23	GS	W W W	A	20
226-55*	Silica Gel *(sodium hydroxide)*	7 x 70	2	150/75	GS	W W W	B	20
226-56* (OVS)	Tenax TA/Glass Fiber Filter	13→8 x 75	2	140/70	GO	F F G T	V	10
226-57* (OVS)	XAD-7/Glass Fiber Filter	13→8 x 75	2	200/100	GO	F F G T	V	10
226-57A* (OVS)	XAD-7/Glass Fiber Filter	13→8 x 75	2	200/100	GO	F F G T	V	50
226-58* (OVS)	XAD-2/Quartz Filter	13→8 x 75	2	270/140	GO	F F Q T	V	10
226-58A* (OVS)	XAD-2/Quartz Filter	13→8 x 75	2	270/140	GO	F F Q T	V	50
226-59-01	Porapak-N	6 x 70	2	88/44	GS	W W W	A	50
226-59-03	Porapak-Q	6 x 70	2	78/39	GS	W W W	A	50
226-59-04	Porapak-R	6 x 70	2	70/35	GS	W W W	A	50
226-61* 226-61A*	Silica Gel/Charcoal *(charcoal treated with sodium hydroxide)*	10 x 210 10 x 210	3 3	750/1250/250 750/1250/250	GS GS	W W R W W R W W	D D	50 20
226-67*	Anasorb CSC, Coconut Charcoal *(potassium hydroxide)*	6 x 70	2	100/50	GS	W R W W	A	50
226-68◊	JXC Charcoal, Drierite *(hydroquinone)*	8→6 x 160	3	1600/160/110	GS	W W W W	D	20
226-70A◊	Silica Gel *(p-methoxyphenol)*	8 x 150	2	1200/600	GS	W W W	C	10
226-73*	Anasorb CSC, Coconut Charcoal *(t-butylcatechol)*	6 x 70	2	100/50	GS	W W W	A	50
226-75	Anasorb 727¥	8 x 110	2	300/150	GS	W W W	B	20
226-80*	Anasorb 747 *(potassium hydroxide)*	6 x 70	2	100/50	GS	F W W	A	50
226-81A	Anasorb 747	6 x 70	2	140/70	GS	F W W	A	20

* *Limited shelf-life; contact SKC for more information* ¥ *Anasorb 727 is equivalent to Chromosorb 106.*
◊ *Limited shelf-life; refrigerator/freezer storage may be required. Contact SKC.*

TUBE ENDS: ***GS:*** *Glass Sealed* ***GO:*** *Glass Open* ***SS:*** *Stainless Steel Open*
SEPARATORS: ***W:*** *Glass Wool* ***G:*** *Glass Fiber Filter* ***F:*** *Foam* ***T:*** *PTFE Ring* ***S:*** *Screen* ***N:*** *Nylon Ring* ***Q:*** *Quartz Filter* ***R:*** *Glass Spacer*

For compliance sampling, use tubes as specified in a validated sampling method. It is the user's responsibility, employing a suitable method, to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use. The user should adjust the sampling parameters for specific conditions and evaluate tubes under conditions of use to ensure that the desired results will be obtained.

Tech Tips

▶ *The approximate surface areas for 20/40-mesh SKC Anasorb 747 and Anasorb CSC sorbents are as follows:*

- Anasorb 747 is 980 m^2/gm

- Anasorb CSC is 1200 m^2/gm

▶ **Q:** ***Is it possible to increase the flow rate of a method to lower the detection limit?***
A: *NIOSH recommends not exceeding the method-stated maximum flow rate. Instead, sample for a longer period and monitor closely for breakthrough.*

Standard of Good Practice

Use inert PTFE tubing to connect two tubes in series or for other applications in which the air sample comes into contact with the tubing before collection onto the sampling media.

For Sample Pumps
see pages 4-29

Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 143-211 or search the online Sampling Guide at www.skcinc.com for methods and required sorbent tubes.

Cat. No.	Sorbent *(treatment)*	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-82	Anasorb 747 Anasorb 747	8 x 110 8 x 110	1 1	400 200	GS	F W F W	D	**20 sets**
226-83	Anasorb 747	8 x 110	2	400/200	GS	F W W	B	**50**
226-84	Anasorb 747	10 x 110	2	800/200	GS	F W W	C	**20**
226-92*	Polyurethane Foam (PUF)	22 x 100	1	76 mm	GO	—	P	**ea**
226-93	XAD-4	7 x 70	2	80/40	GS	W W W	B	**50**
226-94	XAD-7	6 x 70	2	60/30	GS	W W W	A	**50**
226-95	XAD-7	6 x 110	2	100/50	GS	W W W	B	**50**
226-96*	XAD-7 *([NBD] chloride)*	8 x 110	2	100/50	GS	W W W	B	**50**
226-97	XAD-7 *(specially cleaned)* XAD-7 (2 tubes)	8 x 110 8 x 110 (2)	1 1	175 175 (2)	GS	W G W W W	—	**20 sets**
226-98*	XAD-7 *(phosphoric acid)*	6 x 70	2	80/40	GS	W W W	A	**50**
226-99* (OVS)	Silica Gel/Glass Fiber Filter	13→8 x 75	2	520/260	GO	F F G T	V	**10**
226-106A	Chromosorb 102	8 x 110	2	200/100	GS	W W W	B	**20**
226-107	Chromosorb 102	8 x 110	2	100/50	GS	W W W	B	**50**
226-110	Chromosorb 106	7 x 70	2	100/50	GS	W W W	B	**50**
226-111A	Chromosorb 106	10 x 150	2	600/300	GS	W W W	C	**10**
226-114	Porapak-P	6 x 110	2	100/50	GS	F W W	B	**50**
226-115	Porapak-Q	6 x 110	2	150/75	GS	W W W	B	**50**
226-116A*	Porapak-T Porapak-T	6 x 40 6 x 40	1 1	75 25	GO	W W W W	B	**10 sets**
226-117◊	XAD-2 *(2-hydroxymethyl piperidine)*	6 x 110	2	150/75	GS	W W W	B	**20**
226-118◊	XAD-2 *(2-hydroxymethyl piperidine)*	6 x 110	2	120/60	GS	W W W	B	**20**
226-119◊ **226-119A◊** **226-119-7**	High-purity Silica Gel with low background *(2,4-dinitrophenylhydrazine)*	6 x 110 6 x 110 7 x 110	2 2 2	300/150 300/150 300/150	GS GS GS	W W W W W W W W W	B B B	**20** **100** **20**
226-120◊	High-purity Silica Gel with low background *(2,4-dinitrophenylhydrazine)* with built-in ozone scrubber	8 x 115	3	1500/ 300/150	GS	W W W W	D	**20**

* *Limited shelf-life; contact SKC for more information* ◊ *Limited shelf-life; refrigerator/freezer storage may be required. Contact SKC.*

TUBE ENDS: GS: *Glass Sealed* ***GO:*** *Glass Open*
SEPARATORS: W: *Glass Wool* ***G:*** *Glass Fiber Filter* ***F:*** *Foam* ***T:*** *PTFE Ring* ***S:*** *Screen* ***N:*** *Nylon Ring* ***Q:*** *Quartz Filter* ***R:*** *Glass Spacer*

For compliance sampling, use tubes as specified in a validated sampling method. It is the user's responsibility, employing a suitable method, to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use. The user should adjust the sampling parameters for specific conditions and evaluate tubes under conditions of use to ensure that the desired results will be obtained.

Data Interpretation
Formaldehyde

▶ ***LEED Green Buildings***
Formaldehyde Indoor Air Maximum Concentration: 27 ppb. Maximum concentration in health care facilities is 16.3 ppb.

See formaldehyde sorbent tube Cat. No. 226-119 or 226-120 at right.

Source: LEED for New Construction Rating System v4 (U.S. Green Building Council, http://www.usgbc.org)

For continuous formaldehyde measurement see the Formaldehyde Multimode Monitor on page 136

SKC Formaldehyde SPIKES QC Media

SKC makes laboratory quality control easy with its pre-spiked Formaldehyde SPIKES sorbent tubes. SPIKES are 6 x 110-mm (OD x L) glass-sealed sorbent tubes. Each tube contains two sections (300/150 mg) of high-purity (low-background) silica gel sorbent treated with 2,4-dinitrophenylhydrazine and glass wool separators (WWW). The 300-mg section is spiked with formaldehyde to ± 25% of the stated target level. **Formaldehyde SPIKES are stocked at these commonly requested levels and are sold in packages of 10.**

Spike Level	Cat. No.	Qty.
1.0 µg	**227-111**	**10**
3.0 µg	**227-112**	**10**
5.0 µg	**227-113**	**10**
7.5 µg	**227-114**	**10**
10.0 µg	**227-115**	**10**

Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 143-211 or search the online Sampling Guide at www.skcinc.com for methods and required sorbent tubes.

Cat. No.	Sorbent *(treatment)*	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-124*	PUF/Tenax TA/PUF	22 x 100	3	3 cm/750 mg/ 3 cm	GO	—	P	**ea**
226-126*	PUF/Glass Fiber Filter	22 x 100	1	76 mm	GO	F S G N	P	**ea**
226-129*	PUF/XAD-2/PUF	65 x 125	3	50 mm/10 gm/ 25 mm	GO	—	—	**ea**
226-131*	PUF	65 x 125	1	75 mm	GO	—	—	**ea**
226-134*	Tenax TA	16 x 125	1	1.6 gm	GO	W W	—	**ea**
226-142*	Carbon Beads/PTFE Filter *(carbon beads treated with potassium hydroxide)*	16→8 x 85	2	100/50	GO	W W W T T	—	**5**
226-143*	PUF/XAD-2/PUF	22 x 100	3	3 cm/1500 mg/ 3 cm	GO	—	P	**ea**
226-151◊	Charcoal *(proprietary coating)*	6 x 70	2	100/50	GS	W W W	A	**20**
226-153◊	XAD-2 *(di-n-butylamine)*	8 x 110	2	400/200	GS	W W W	B	**20**
226-154	Anasorb 747	6 x 70	1	200	GS	W W	A	**50**
226-165A◊	Silica Gel *(mercuric cyanide)*	6 x 110	2	300/150	GS	W W W	B	**20**
226-170	XAD-4	6 x 70	1	120	GS	W W	A	**20**
226-171*	Anasorb 747/Tenax TA	16 x 125	2	5.2 gm/1.2 gm	GO	W W	—	**ea**
226-175	XAD-4	8 x 150	2	400/200	GS	W W W	—	**20**
226-176	Silica Gel *(hydrochloric acid)*	10 x 150	3	700/150/150	GS	W W W W	C	**20**
226-177◊	Silica Gel *(silver nitrate)*/Glass Fiber Filter *(sodium carbonate/glycerol)*	16→8 x 85	2	200/200	GO	T T T W W	—	**5**
226-178◊	Anasorb 747 *(hydrobromic acid)*	6 x 70	2	100/50	GS	W W W	A	**20**
226-182◊	Molecular Sieve *(triethanolamine)* and oxidizer	10 x 110	3	400/800/400	GS	W W W W	C	**50**
226-183	Silica Gel *(specially washed and baked)/Glass Fiber Filter*	[7 x 110 7 x 110	[1 1	[600 600	GS	[W G W W G W	D	**20 sets**

* *Limited shelf-life; contact SKC for more information*

◊ *Limited shelf-life; refrigerator/freezer storage may be required. Contact SKC.*

TUBE ENDS: GS: *Glass Sealed* ***GO:*** *Glass Open*
SEPARATORS: W: *Glass Wool* ***G:*** *Glass Fiber Filter* ***F:*** *Foam* ***T:*** *PTFE Ring* ***S:*** *Screen* ***N:*** *Nylon Ring* ***Q:*** *Quartz Filter*

For compliance sampling, use tubes as specified in a validated sampling method. It is the user's responsibility, employing a suitable method, to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use. The user should adjust the sampling parameters for specific conditions and evaluate tubes under conditions of use to ensure that the desired results will be obtained.

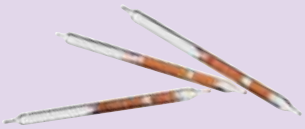
SKC Quality Bulk Sorbents for Laboratory QA/QC Requirements

- *Meet stringent specifications for environmental applications*
- *Undergo extensive cleaning procedures to ensure low backgrounds*

Sorbent	Mesh Size	Amount (grams)	Cat. No.
Anasorb CSC	20/40	100	**P2260101**
Silica Gel	20/40	100	**P22610**
Tenax GR	20/35	10	**P226124**
Tenax TA	35/60	10	**P226125**
	20/35	10	**P226126**
Anasorb GCB2	20/40	10	**P226127**
Anasorb GCB1	20/40	10	**P226128**
	60/80	10	**P226132**
Anasorb C300	20/40	100	**P226171**
Anasorb 747	20/40	100	**P226200**

Standard of Good Practice

▶ *Maintain the sorbent tube in a vertical position when sampling. This position will prevent the sorbent from falling away from the wall of the glass tube and creating a small channel for the air to pass through without adsorbing onto the sorbent.*



For Formaldehyde SPIKES QC media
see page 40

For Sample Pumps
see pages 4-29

Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 143-211 or search the online Sampling Guide at www.skcinc.com for methods and required sorbent tubes.

Cat. No.	Sorbent *(treatment)*	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-186◊	Oxidizer	7 x 110	1	800	GS	W W	B	**20**
226-188◊	Silica Gel *(2,4-dinitrophenylhydrazine)*	10 x 110	2	800/200	GS	W W W	C	**20**
226-191	Silica Gel *(o-phenylenediamine)*	8 x 110	2	520/260	GS	W W W	B	**50**
226-192	XAD-2/XAD-2/Anasorb CSC	8 x 110	3	50/100/150	GS	W W W W	B	**50**
226-193-UC	Silica Gel *(MTSO)*	7 x 110	1	800	GS	W W	B	**20**
226-196	Anasorb CSC, Coconut Charcoal *(t-butylcatechol)*	8 x 110	2	400/200	GS	W W W	B	**20**
226-199-UC	Silica Gel *(MTSO)*	8 x 110	2	800/200	GS	W G W	B	**20**
226-330‡∞	Anasorb GCB2/GCB1/Carbosieve S-III	6 x 115	3	250/150/100	GO	W W W W	N/A	**ea**
226-339‡§∞	Tenax TA	1/4 x 3-1/2 in	1	100	GO	W W	N/A	**ea**
226-340‡§∞	Tenax TA	1/4 x 3-1/2 in	1	100	SS	S W W S	N/A	**ea**
226-341‡§∞	Carbosieve S-III	1/4 x 3-1/2 in	1	100	SS	S W W S	N/A	**ea**
226-345‡§∞	Tenax GR/Anasorb GCB1	1/4 x 3-1/2 in	2	125/120	GO	W W W	N/A	**ea**
226-346‡§∞	Anasorb GCB1/Carbosieve S-III	1/4 x 3-1/2 in	2	175/80	GO	W W W	N/A	**ea**
226-347‡§∞	Anasorb GCB2/GCB1/Carbosieve S-III	1/4 x 3-1/2 in	3	120/125/105	GO	W W W W	N/A	**ea**
226-348‡§∞	Tenax GR/Anasorb GCB1	1/4 x 3-1/2 in	2	175/150	SS	O S W S O	N/A	**ea**
226-349‡§∞	Anasorb GCB1/Carbosieve S-III	1/4 x 3-1/2 in	2	280/165	SS	S W S	N/A	**ea**
226-350‡§∞	Anasorb GCB2/GCB1/Carbosieve S-III	1/4 x 3-1/2 in	3	210/140/165	SS	S W W W S	N/A	**ea**
226-356‡§∞	Anasorb GCB1	1/4 x 3-1/2 in	1	400	SS	S W W S	N/A	**ea**
226-357‡§∞	Tenax TA	1/4 x 3-1/2 in	1	250	SS	S W W S	N/A	**ea**
226-358‡§∞	Chromosorb 106	1/4 x 3-1/2 in	1	350	SS	S W W S	N/A	**ea**
226-360‡§∞	Tenax TA	1/4 x 3-1/2 in	1	250	GO	W W	N/A	**ea**
226-363‡§∞	Carbopack X	1/4 x 3-1/2 in	1	400	SS	S W W S	N/A	**ea**

‡ *Tubes are chemically purged before shipping; use within 6 months or recondition, restocking fee applies.* ∞ *Available unpurged, see page 47*
§ *Each tube has a flow direction arrow and unique number.* ◊ *Limited shelf-life; refrigerator/freezer storage may be required. Contact SKC.*

***TUBE ENDS: GS:** Glass Sealed **GO:** Glass Open **SS:** Stainless Steel Open*
***SEPARATORS: W:** Glass Wool **G:** Glass Fiber Filter **F:** Foam **T:** PTFE Ring **S:** Screen **N:** Nylon Ring **O:** Other **Q:** Quartz Filter*

For compliance sampling, use tubes as specified in a validated sampling method. It is the user's responsibility, employing a suitable method, to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before use. The user should adjust the sampling parameters for specific conditions and evaluate tubes under conditions of use to ensure that the desired results will be obtained.

SKC Sampling Media and Pump for Peracetic Acid (PAA)

SKC offers the sampling media and pump required for sampling PAA according to the French Institut National de Recherche et de Sécurité (INRS) method for the simultaneous measurement of PAA and hydrogen peroxide (HP). Method media include sorbent tubes containing sorbent treated with high-purity MTSO reagent for ultra-low background (*see Cat. Nos. 226-193-UC and 226-199-UC above*), quartz filters coated with titanium oxysulfate hydrate in 25-mm cassette (*see Cat. No. 225-9030 on page 65*), and AirChek XR5000 sample pump (*see pages 14-15*) to provide the 1 L/min flow rate at higher back pressure. PAA is analyzed by high-performance liquid chromatography with UV detection and HP by molecular absorption spectrometry.

Contact SKC for the latest updates on OSHA methods in development for PAA and hydrogen peroxide.

Standard of Good Practice
Store and prepare sampling media in solvent-free environments.

Tube Breakers

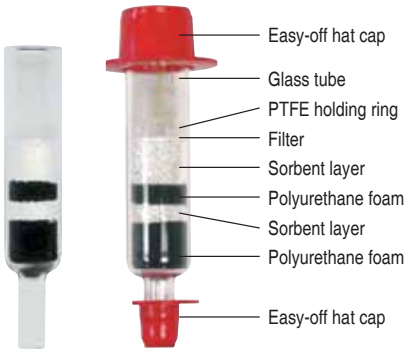
Description	Cat. No.
Tube Breaker/Capper, stainless steel Size S, 6 and 7-mm OD tubes	**222-3-50**
Size L, 8 and 10-mm OD tubes	**222-3-51**
Tube Scorer/Breaker, for 6-mm OD tubes; scores and breaks end tips off glass tubes, leaving a clean, smooth opening	**800-01200**

For Thermal Desorption Tubes purged by SKC or your lab
see page 47

OSHA Versatile Sampler (OVS) Tubes

For Sampling Pesticides, Explosives, and Glycols

- Sorbent and filter combined in one tube
- Collect aerosols and vapors simultaneously
- Low backgrounds ensure sample integrity
- Meet OSHA and NIOSH method design specifications
- Eliminate the need for cumbersome filter and tube sampling trains
- Available with a variety of sorbents
- Easy-off hat caps



OSHA originally designed OSHA Versatile Sampler (OVS) Tubes to overcome the inconveniences of earlier methods. SKC OVS Tubes contain a filter to trap aerosols and a two-section sorbent bed to adsorb vapors in one specially constructed glass tube that eliminates cumbersome filter and tube sampling trains. Only cleaned and verified materials are used in OVS Tubes to ensure low background interference. A flow rate of 1 L/min provided by a personal sample pump is typically used to obtain volumes ranging from 60 to 480 liters. Samples are solvent extracted and analyzed by GC or HPLC with detector.

Available with a variety of sorbent and filter combinations, SKC OVS Tubes are truly versatile for sampling applications and methods including pesticides such as DDVP (dichlorvos), carbaryl (Sevin), chlorpyrifos (Dursban), Diazinon, malathion, and parathion; explosives such as TNT and DNT; alcohols such as glycols; and biocides.

Application — Method	Sorbent (mg)	Filter	Cat. No.	Qty.
Pesticides — OSHA 62, 63, 67, 70, 74, OSHA CSI	XAD-2 (270/140)	Glass fiber	**226-30-16**	**10**
Organotin Compounds* — OSHA CSI	XAD-2 (270/140)	Glass fiber	**226-30-16A**	**50**
Pesticides, organophosphorus — NIOSH 5600, 5601, 5602	XAD-2 (270/140)	Quartz fiber	**226-58**	**10**
			226-58A	**50**
Explosives (trinitrotoluene [TNT] and dinitrotoluene [DNT]) — OSHA 44 **Phthalate Esters —** OSHA 104 **Acrylates and Benzophenone —** Non-agency method†	Tenax TA (140/70)	Glass fiber	**226-56**	**10**
Caprolactam Vapor — OSHA CSI	XAD-7 (200/100)	Glass fiber	**226-57**	**10**
Glycols — NIOSH 5523	XAD-7 (200/100)	Glass fiber	**226-57A**	**50**
Kathon 886 Biocide — Non-agency method‡	Silica gel (520/260)	Glass fiber	**226-99**	**10**
Accessories				
OVS Tube Holder includes 0.9 meter (3 feet) of tubing and collar clip, *see details at above right*			**224-29V**	**ea**
OVS Adapter Kit includes tubing and adapter for calibration of OVS Tubes			**224-31**	**ea**

* *Methyl tin mercaptide, stannous-2-ethyl hexanoate, butyltin trichloride* † *See Ref. 39 on page 213.* ‡ *See Ref. 55 on page 213.*

OVS Tube Holder

OSHA Versatile Sampler Tubes are typically used at a flow rate of 1 L/min provided by a personal sample pump. The special OVS Tube Holder is designed to accommodate the tube's 13-mm diameter, provide a convenient clip to attach the tube in the breathing zone, and protect the tube during sampling.

OVS Tube Holder includes fitting with durable protective cover, 0.9 meter (3 feet) of tubing, and collar clip
Do not use an Adjustable Low Flow Holder
Cat. No. 224-29V