



Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 188-243 or search the online Sampling Guides at skcinc.com for methods and required sorbent tubes.

the SKC Advantage!

- ✓ **Over 45 years of proven performance!** Produced the first commercial sorbent tube
- ✓ **Validation and reliability**
SKC tubes are specified and used by OSHA, NIOSH, EPA, HSE, 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 36-37

Cat. No.	Sorbent (treatment)	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-01	Anasorb CSC, Coconut Charcoal	6 x 70	2	100/50	GS	F F W	A	50
226-01A	Anasorb CSC, Coconut Charcoal	6 x 70	2	100/50	GS	F F W	A	10
226-01-BULK	Anasorb CSC, Coconut Charcoal	6 x 70	2	100/50	GS	F F W	A	1000
226-01GWS	Anasorb CSC, Coconut Charcoal	6 x 70	2	100/50	GS	W W W	A	50
226-09	Anasorb CSC, Coconut Charcoal	8 x 110	2	400/200	GS	F W W	B	50
226-09-BULK	Anasorb CSC, Coconut Charcoal	8 x 110	2	400/200	GS	F W W	B	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
226-22	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
226-29	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)	XAD-2/Glass Fiber filter	13→8 x 75	2	270/140	GO	F F G T	V	10
226-30-16A* (OVS)	XAD-2/Glass Fiber filter	13→8 x 75	2	270/140	GO	F F G T	V	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
226-35-03	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

* Limited shelf-life; contact SKC for more information † Anasorb C300 is equivalent to Hydrar and Carulite.

TUBE ENDS: GS: Glass Sealed GO: Glass Open
SEPARATORS: W: Glass Wool G: Glass Fiber Filter F: Foam T: PTFE Ring

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.



Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 188-243 or search the online Sampling Guides at 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.
226-36	JXC Charcoal	8 x 150	2	630/315	GS	F W W	C	50
226-37	Anasorb CSC, Coconut Charcoal	8 x 110	1	400	GS	F W	D	50 sets
	Anasorb CSC, Coconut Charcoal	8 x 110	1	200	GS	F W	D	
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
226-40A	Molecular Sieve (triethanolamine)	7 x 70	1	400	GS	W W	D	10 sets
	Oxidizer	7 x 110	1	400	GS	W W	D	
	Molecular Sieve (triethanolamine)	7 x 70	1	600	GS	W W	D	
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
226-59-03	Porapak-Q	6 x 70	2	78/39	GS	W W W	A	50
226-61	Silica Gel/Charcoal (charcoal treated with sodium hydroxide)	10 x 210	3	750/1250/250	GS	W W R W	D	50
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.

TUBE ENDS: GS: Glass Sealed GO: Glass Open

SEPARATORS: W: Glass Wool G: Glass Fiber Filter F: Foam T: PTFE 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.



Cat. No. 226-40, the standard in OSHA Method ID-190 and NIOSH 6014, is now Cat. No. 226-40A! This new three-tube sampling train contains a new oxidizer developed and validated by SKC to replace the discontinued original oxidizer (see left). Even more exciting is the availability of the three sorbent sections in a single 10 x 110-mm glass tube. The single tube option is available as Cat. No. 226-182 (see page 51). See the validation report at skcinc.com.



*For Sample Pumps
see pages 9-25*



Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 188-243 or search the online Sampling Guides at skcinc.com for methods and required sorbent tubes.

Tech Tips

► Breakthrough is indicated when there is $\geq 25\%$ contamination in the backup layer of sorbent. It can also mean the sorbent tube was inserted into the tube holder in the wrong direction. Always insert the tube into the holder with the arrow on the tube pointing toward the tube holder. If no arrow is printed on the tube, insert the end of the tube with the smallest sorbent section (backup section) into the tube holder.

► **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.

Cat. No.	Sorbent (treatment)	Size (mm) OD x L	Sections	Sorbent (mg)	Ends	Separators	Tube Cover	Qty.
226-82	Anasorb 747	8 x 110	1	400	GS	F W	D	20 sets
	Anasorb 747	8 x 110	1	200		F W		
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)	8 x 110	1	175	GS	W G W	—	20 sets
	XAD-7 (2 tubes)	8 x 110 (2)	1	175 (2)		W W		
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	6 x 40	1	75	GO	W W	B	10 sets
	Porapak-T	6 x 40	1	25		W W		
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	High-purity Silica Gel with low back-ground (2,4-dinitrophenylhydrazine)	6 x 110	2	300/150	GS	W W W	B	20
226-119A		6 x 110	2	300/150	GS	W W W	B	100
226-119-7		7 x 110	2	300/150	GS	W W W	B	20
226-120	High-purity Silica Gel with low back-ground (2,4-dinitrophenylhydrazine) with built-in ozone scrubber	8 x 115	3	1500/300/150	GS	W W W W	D	20

TUBE ENDS: GS: Glass Sealed GO: Glass Open

SEPARATORS: W: Glass Wool G: Glass Fiber Filter F: Foam T: PTFE Ring

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.

In-house methods or SOPs?

SKC custom sorbent tubes are your solution

- Specify solvent or thermal desorption
- Choose tube, sorbent, and separator materials
- Precision manufacturing, stringent QC, and competitive prices

VISIT SKCINC.COM/CUSTOM OR CONTACT SKC FOR A QUOTE



Visit skcinc.com/Training



Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 188-243 or search the online Sampling Guides at 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	H	5
226-143	PUF/XAD-2/PUF	22 x 100	3	3 cm/1500 mg/ 3 cm	GO	—	P	ea
226-153	XAD-2 (di-n-butylamine)	8 x 110	2	400/200	GS	W W W	B	20
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
226-175	XAD-4	8 x 150	2	400/200	GS	W W W	C	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	H	5
226-178	Anasorb 747 (hydrobromic acid)	6 x 70	2	100/50	GS	W W W	A	20
226-182 226-182A	Molecular Sieve (triethanolamine) and oxidizer	10 x 110	3	400/800/400	GS	W W W W	C	50 10
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
226-184	Chromosorb 106/ Chromosorb 106/ Sodium Sulfate	8 x 150	3	150/300/1000	GS	W W W W	D	50

* Limited shelf-life; contact SKC for more information

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

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 Bulk Sorbents for Laboratory QA/QC Requirements

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



Sorbent	Mesh Size	Amount (grams)	Cat. No.
Anasorb 747	20/40	100	P226200
Anasorb C300	20/40	100	P226171
Anasorb CSC	20/40	100	P2260101
Anasorb GCB1	20/40	10	P226128
	60/80	10	P226132
Anasorb GCB2	20/40	10	P226127
Anasorb JXC	20/40	100	P2263601
Silica Gel	20/40	100	P22610
Tenax GR	20/35	10	P226124
Tenax TA	35/60	10	P226125
	20/35	10	P226126
XAD-2	20/60	100	P226201

Best Practice

- Maintain the sorbent tube in a vertical position when sampling. This position will prevent sorbent from falling away from the tube wall and creating a small channel through which air would pass without contaminants adsorbing onto the sorbent.

16-mm Diameter Tube Holder

Accommodates the 16-mm diameter of SKC Sorbent Tubes Cat. Nos. 226-142 and 226-177



16-mm Diameter Tube Holder includes fitting with durable protective cover, 3 feet of tubing, and collar clip. Do not use an Adjustable Low Flow Holder

Cat. No.224-29H



*For Sample Pumps
see pages 9-25*



Sorbent Tube Selection Guide

To select a tube for a specific compound, refer to the SKC Sampling Guide on catalog pages 188-243 or search the online Sampling Guides at skcinc.com for methods and required sorbent tubes.

Good Practice

Store and prepare sampling media in solvent-free environments.

Tube Breakers

Description	Cat. No.
Tube Breaker , stainless steel, for 6, 7, 8, and 10-mm OD tubes	 226-03-055
Tube Scorer/Breaker , for 6-mm OD tubes; scores and breaks end tips off glass tubes, leaving a clean, smooth opening	 800-01200

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
226-210	Soda Lime	7 x 110	2	600/200	GS	W W W	B	50
226-211	XAD-7	8 x 110	2	175/175	GS	W W W	B	20
226-213	XAD-2 (p-anisidine)	8 x 110	2	200/100	GS	W W W	B	20
226-214	XAD-2 (naphthylisocyanate)	8 x 110	2	200/100	GS	W W 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 conditioned before shipping; use within 6 months or recondition, restocking fee applies. ∞ Available unconditioned, see page 57

§ Each tube has a flow direction arrow and unique number.

TUBE ENDS: GS: Glass Sealed GO: Glass Open SS: Stainless Steel Open

SEPARATORS: W: Glass Wool G: Glass Fiber Filter S: Screen O: Other

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.



*For Thermal
Desorption Tubes
conditioned by
SKC or your lab
see page 57*

SKC IFV Pro Sampler for Mixed-phase Contaminants

ACGIH has assigned a TLV with the Inhalable Fraction and Vapor (IFV) designation to over 50 compounds that can be found in mixed phases including pesticides, diesel fuel, cresol, and maleic anhydride. The SKC IFV Pro Sampler features an IOM-style inlet for collection of the inhalable fraction onto 25-mm filters and uses sorbent tubes for collection of the vapor phase at a flow rate of 1 L/min. See page 131 for more information.

