ANALYT MESSTECHNIK



INSTRUCTIONS FOR USE

SKC Passive Thermal Desorption Tubes 226-520

How to find the inlet, swap the inlet screw cap for the diffusion cap before sampling, and seal the tube again for transport to the laboratory, for the SKC passive thermal desorption tubes 226-520.

AMTC-IN-0047

About this document

These instructions cover the SKC passive thermal desorption tubes 226-520: stainless steel sorbent tubes that sample volatile organic compounds by diffusion, without a pump. The tubes leave the factory sealed at both ends. Before sampling you replace the seal on the inlet with a diffusion cap; after sampling you seal the tube again for transport to the laboratory.

Read Safety (p. 4) first. Product and supplied items (p. 5) describes the tube and its parts. Before use (p. 6) shows how to tell the inlet from the outlet and what you need. Procedure (p. 7) gives the steps before sampling, and After use and sample handling (p. 8) the steps after it. Ordering information (p. 9) gives the ordering numbers. Where to place the tubes, how long to sample and how the laboratory analyses them is set by the method you follow, for example U.S. EPA Method 325A or HSE MDHS 104.

Keep these instructions for the lifetime of the product. The current revision is on the product page at analyt-mtc.com.

How these instructions mark information

NOTICE

Practices not related to personal injury — damage to the product, the process or the sample.

Document information

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Revision history

Rev.	Date	Change
2	October 2026	Quality programme: new document type, number and identity pages.
1	October 2026	First issue.

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CHAPTER 1

Safety

Read this chapter before you use the tubes. Its safety message is repeated in the steps where it applies.

Intended use

The SKC passive thermal desorption tubes 226-520 sample volatile organic compounds by diffusion, without a pump, with the diffusion cap fitted on the inlet. Where to place them, how long to sample and how the laboratory analyses them is set by the method you follow, for example U.S. EPA Method 325A or HSE MDHS 104. A tube can be used again once the laboratory has conditioned it again.

Keeping the tube sealed

NOTICE

The PTFE ferrule inside the inlet screw cap can fall out when the cap comes off the tube. Without the ferrule, the screw cap no longer seals against the tube. Lift the screw cap and plug off gently, and keep them together, ferrule inside, until you refit them after sampling.

CHAPTER 2

Product and supplied items

Each tube is sealed at both ends by a brass Swagelok screw cap with a plug. Before sampling, the seal on the inlet comes off and a diffusion cap goes on in its place. The seal on the outlet stays on the whole time.

The tube is a stainless steel thermal desorption tube, 89 mm long with an outside diameter of 6.35 mm, filled with 400 mg of pre-conditioned sorbent: Carbopack X. A PTFE ferrule inside each screw cap seals it against the tube. Each tube carries its own identification number and bar code, and can be reused once the laboratory has conditioned it again. Packs of 10 tubes come with a diffusion cap for each tube.

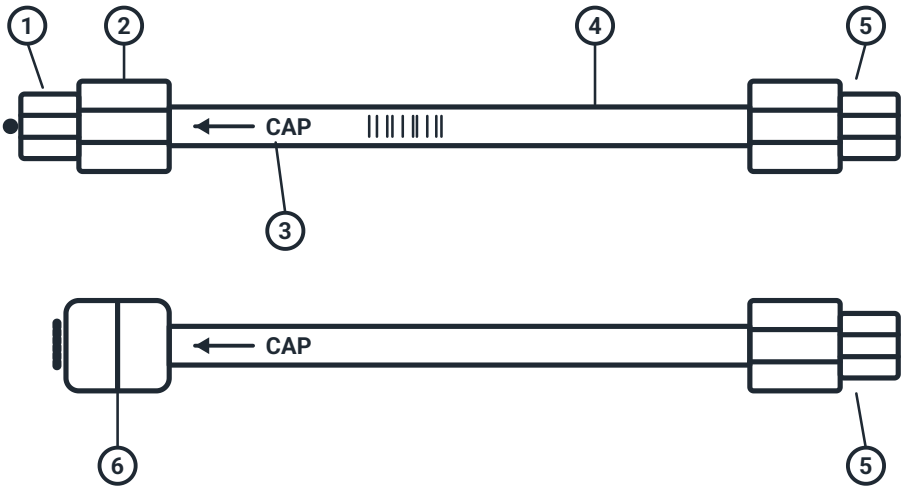


Figure 2-1. Top: the tube as supplied, sealed at both ends. Bottom: ready for sampling. (1) Plug on the inlet, with a green dot on its end. (2) Screw cap on the inlet, with a PTFE ferrule inside. (3) Printed mark: the word CAP and an arrow pointing to the inlet. (4) Tube with sorbent, identification number and bar code. (5) Screw cap and plug on the outlet: stay on. (6) Diffusion cap on the inlet.

CHAPTER 3

Before use

Finding the inlet

Only the inlet end gets the diffusion cap. Two marks show which end it is:

- the word **CAP** printed on the tube, with an arrow pointing to the inlet (3 in Figure 2-1 (p. 5));
- a **green dot** stamped on the end of the inlet plug (1).

What you need

Item	Use
Passive thermal desorption tube, 226-520	The sampler. Use it within 30 days of its conditioning.
Diffusion cap, supplied with the tubes	Replaces the inlet seal during sampling. A fine screen inside also keeps out dust and insects.
Open-end wrench, 9/16 inch	Holds the screw cap on the inlet.
Open-end wrench, 1/2 inch	Turns the plug on the inlet.
Weatherproof shelter 226-526 (outdoors)	Holds up to four tubes, diffusion cap pointing down.

CHAPTER 4

Procedure

Swap the inlet seal for the diffusion cap just before sampling, and put the same seal back as soon as sampling ends. Have both wrenches at hand.

NOTICE

The PTFE ferrule inside the inlet screw cap can fall out when the cap comes off the tube. Without the ferrule, the screw cap no longer seals against the tube. Lift the screw cap and plug off gently, and keep them together, ferrule inside, until you refit them after sampling.

Before sampling

1. Hold the tube upright with the inlet at the top. The inlet end has the printed word CAP with its arrow, and the green dot on the plug (see Finding the inlet (p. 6)).
2. Fit the 9/16 inch wrench on the inlet screw cap and the 1/2 inch wrench on the plug, as in Figure 4-1 (p. 7).
3. Hold the screw cap still and turn the plug **counterclockwise** until it is loose.
4. Lift the plug and the screw cap off the tube together, **carefully**, so that the PTFE ferrule stays inside the screw cap.
5. Push the diffusion cap onto the inlet end of the tube. The tube is ready for sampling.

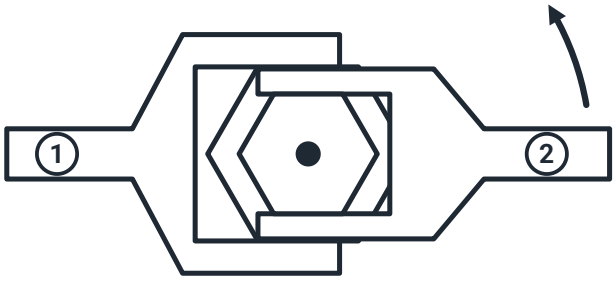


Figure 4-1. The inlet seen from above. (1) 9/16 inch wrench on the screw cap: hold still. (2) 1/2 inch wrench on the plug: turn counterclockwise to loosen, clockwise to tighten. The green dot marks the plug.

Place the tube as your method requires; outdoors, use the weatherproof shelter 226-526, which holds the tube with the diffusion cap pointing down.

CHAPTER 5

After use and sample handling

After sampling

6. Pull the diffusion cap off the tube.
7. Put the screw cap, with its ferrule, and the plug back on the inlet.
8. Screw the plug into the screw cap by hand.
9. Fit both wrenches as in step 2 of Before sampling (p. 7).
10. Hold the screw cap still and turn the plug **clockwise** until it is tight.

The tube is sealed again and ready to go to the laboratory for analysis by thermal desorption and gas chromatography (GC-FID or GC-MS). Record the tube's identification number with your sampling data.

Disposal

Dispose of the tubes under local regulations; separate metal, glass and plastic parts for recycling where possible.

CHAPTER 6

Ordering information

Order from Analyt-MTC with the order codes.

These instructions also cover the tubes with Anasorb GCB1 sorbent (400 mg). For that version, ask Analyt-MTC.

Ordering information

Description	Pack	Order code
Passive thermal desorption tubes, stainless steel, 6.35 mm (1/4 inch) OD, pre-conditioned sorbent (Carbopack X, 400 mg), with diffusion caps and brass Swagelok screw caps with PTFE ferrules	10	226-520
Diffusion caps	10	226-525
Swagelok fittings for 1/4 inch OD × 3½ inch tubes	set of 2	P50291
PTFE ferrules	set of 2	P30121
Weatherproof shelter for up to 4 tubes, 10 cm diameter × 13.7 cm	1	226-526

CHAPTER 7

Service and contacts

The SKC passive thermal desorption tubes are made by SKC. Analyt-MTC is your contact for them: technical questions and warranty matters.

Contact and support

ANALYT-MTC Messtechnik GmbH

German Headquarters

Klosterrunsstraße 18, 79379 Müllheim
Germany

+49 7631 5545

info@analyt-mtc.de

French Subsidiary

175 Avenue d'Alsace, 68000 Colmar
France

+33 3 89 41 47 78

info@analyt-mtc.fr

www.analyt-mtc.com

Before you call

Have the following at hand so that Analyt-MTC can help you quickly:

- the catalogue number on the pack;
- the identification number printed on the tube;
- the method you sample to, and the compounds of interest.

ANALYT-MTC Messtechnik GmbH

Sales, service and calibration

German Headquarters
Klosterrunsstraße 18, 79379 Müllheim
Germany
+49 7631 5545
info@analyt-mtc.de

French Subsidiary
175 Avenue d'Alsace, 68000 Colmar
France
+33 3 89 41 47 78
info@analyt-mtc.fr

www.analyt-mtc.com

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