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Formaldehyde Sample Tubes

For EPA Method TO-11A and ASTM Method D 5197

- **High capacity**
- **Low background**
- **Meet EPA and ASTM specifications**
- **Available with ozone scrubber**
- **Environmental and industrial hygiene applications**

Description

SKC sorbent sample tubes meet the specifications of EPA Method TO-11A (Jan. 1997) and ASTM Method D 5197 (May 1997) for the determination of formaldehyde (and other aldehyde) concentrations in ambient air without the incompatibility and breakthrough problems of the cartridges specified in EPA TO-11.

SKC formaldehyde sample tube Cat. No. 226-119 is 6-mm OD x 110-mm long and contains a 300-mg front sorbent section and a 150-mg backup sorbent section. The sorbent is silica gel coated with 2,4-dinitrophenylhydrazine (DNPH) as specified in EPA TO-11A and ASTM D 5197. SKC tube Cat. No. 226-120 is 8-mm reduced to 6-mm OD x 140-mm long and contains the same coated sorbent and backup sections. However, it also contains a section of potassium iodide that acts as an ozone scrubber as suggested in ASTM D 5197.

Applications

Low background, high capacity, and low pressure drop make SKC formaldehyde tubes extremely useful for both environmental and industrial hygiene applications. In addition, the DNPH chemistry lends itself to monitoring other aldehydes simultaneously in the workplace environment.

When sampling for formaldehyde in the presence of ozone, use SKC tube Cat. No. 226-120 with an ozone scrubber section. This built-in section removes ozone from the sample stream eliminating background interference during analysis.

Performance

Formaldehyde and other aldehydes react with DNPH to form stable hydrazones, which are extracted from the silica gel and analyzed by liquid chromatography. Cartridges previously specified in EPA TO-11 have a high pressure drop with a recommended flow rate of 200 ml/min making them incompatible with many personal sampling pumps. The SKC tubes, with their low pressure drop, can be used with standard personal sampling pumps up to 1.5 L/min. The cartridges lack a backup section to detect sample breakthrough, while the SKC tubes have a 150-mg backup sorbent section. The SKC tubes also have a greater capacity than the previously specified cartridges. The formaldehyde background of the SKC tubes meet EPA TO-11A requirements.

Ordering Information

Description	Cat. No.
Formaldehyde Sampling Tube, silica gel coated with 2,4-dinitrophenylhydrazine, 150/300 mg, pk/20 Freezer storage required.	**226-119***
Formaldehyde Sampling Tube* with built-in ozone scrubber, silica gel coated with 2,4-dinitrophenylhydrazine, 150/300 mg, pk/20 Freezer storage required.	**226-120***

** This tube is not suitable for sampling acrolein.*

SKC®

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