



Certificate of Quality



Cat. No. 226-119

Sorbent: Silica Gel coated with
2,4-Dinitrophenylhydrazine

Tube Holder: Type B

Storage: Store at ≤ 39.2 F (4 C) before use.
After sampling, store at ≤ 39.2 F (4 C).
Expedite shipping of samples to the laboratory.
Friday shipments are not recommended.

**SKC is an ISO 9001 registered
manufacturing company.**

For compliance sampling, use these tubes with an accredited sampling method. Such a method does not purport to address all problems, if any, associated with their use. 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 procedures to meet specific conditions and should test tubes to ensure that the desired results will be obtained.

The SKC Certificate of Quality assures that these sorbent tubes have been manufactured to meet or exceed the requirements for sorbent purity, sample collection and retention, storage stability, and desorption efficiency for the following chemical hazards and analytical methods published by NIOSH, OSHA, EPA, or ASTM:

Acetone	ASTM	D5197
Aldehydes	ASTM	D5197
Aldehydes	EPA	TO-11A
Formaldehyde	ASTM	D5197
Formaldehyde	EPA	IP-6A
Formaldehyde	EPA	TO-11A
Formaldehyde	NIOSH	2016
Glutaraldehyde	NIOSH	2532
Hexanaldehyde (hexanal)	ASTM	D5197

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>.



Operating Instructions

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Sorbent Sample Tube Cat. No. 226-119

Description

Sorbent sample tube Cat. No. 226-119 is a two-section tube containing 300 and 150 mg of DNPH-coated silica gel, respectively. The second section acts as a backup section to detect sample breakthrough.

Sampling

The suggested active sampling flow rate is 200 ml/min within a flow range of 100 to 1000 ml/min. *Typical personal sampling pumps may not achieve a flow rate above 600 ml/min with this tube.* For additional sampling parameters, consult the method used. Sampling parameters may vary with ambient concentrations of the analyte.

This sorbent tube is **not recommended for the collection of acrolein** due to numerous problems reported with the instability of the acrolein-DNPH derivative during collection and storage.

Interferences

Ozone interference is associated with DNPH-coated adsorbent tubes. Sorbent sample tube Cat. No. 226-120 (a Cat. No. 226-119 tube with built-in ozone scrubber) may be used in atmospheres where ozone is present.

Sorbent sample tube Cat. No. 226-119 contains the hydrazone derivative of acetone, which may cause interference in the analysis of various aldehydes. It is important that the analytical method is able to resolve this interference.

The sorbent inside these tubes contains a small amount of residual acetonitrile used in processing the sorbent. Acetonitrile may off-gas during sampling; therefore, exposure monitoring for acetonitrile should **not** be performed concurrently when these sorbent tubes are in use.

Preparing Formaldehyde Samples for Analysis

1. Place each sorbent section into separate 3-dram glass vials.
2. Add 3 ml* of acetonitrile to each vial. Cap each vial.
3. Shake each vial periodically over a 30-minute period.

Analyzing Formaldehyde Samples

1. Analyze sample extracts by HPLC with UV detection at 365 nm.
2. Several tubes should be analyzed from the lot to determine background.
3. The background must be subtracted from the sample result.

* 3 ml is the minimum volume needed to achieve good recoveries. Larger extraction volumes may be used but will result in higher limits of quantitation.