



Operating Instructions

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Sampling Train for Hydrogen Peroxide/Peroxyacetic Acid Cat. Nos. 225-9030 and -1345 and either Cat. No. 226-193-UC or 226-199-UC — Non-agency Method 57

Method

Non-agency Method 57* for simultaneous sampling of hydrogen peroxide (HP) and peroxyacetic acid (peracetic acid or PAA).

Sampling Media and Train



Ensure that filter cassettes are at room temperature before sampling.

Follow the method* in assembling the sampling train.

1. **Pre-filter 225-9030 collects HP:** 2 quartz filters coated with titanium oxysulfate hydrate preloaded in a 25-mm 2-piece polystyrene cassette with no support pad
2. **Tygon Tubing 225-1345 connects pre-filter cassette to sorbent tube:** 1/4-inch ID x 3/8-inch OD
3. **Sorbent Tube 226-193-UC or 226-199-UC collects PAA:**

226-193-UC (single section): 7 x 110-mm glass tube containing 800 mg silica gel coated with methyl p-tolylsulfonoxide (MTSO) with two glass wool separators

226-199-UC (two sections): 8 x 110-mm glass tube containing 800/200 mg silica gel coated with methyl p-tolylsulfonoxide (MTSO) with two glass wool separators and a glass fiber filter separating the sections

4. **Tygon Tubing 225-1345 connects sorbent tube to sample pump inlet:** 1/4-inch ID x 3/8-inch OD
5. **Sample Pump capable of maintaining constant flow at 1 L/min** for up to 30 minutes at high back pressures. *SKC recommends the AirChek® XR5000 or equivalent.*

Flow Rate

A constant flow rate of 1 L/min must be maintained to provide good recoveries of PAA. Lower flows do not allow complete collection of PAA as it has time to react with the coated pre-filter resulting in underestimated exposure; higher flows typically exceed pump back pressure capabilities.

Storage

Prior to Sampling:

Coated filter 225-9030 may be stored at ≤ 39.2 F (4 C) for up to 6 months.

Sorbent Tubes 226-193-UC and 226-199-UC may be stored at ≤ 39.2 F (4 C) for up to 1 year.

Sample Stability:

Samples on Coated Filter 225-9030 may be stored at 69.8 F (21 C) or < 39.2 F (4 C) for up to 30 days. Wrap cassettes in foil sheets (provided) to limit exposure to light.

Samples on Sorbent Tubes 226-193-UC and 226-199-UC may be stored at ≤ 39.2 F (4 C) for up to 3 weeks.

* Peroxyacetic Acid/Hydrogen Peroxide; *Annals of Occupational Hygiene*, Vol. 48, No. 8 (2004), pp. 715-721, doi:10.1093/annhyg/meh067