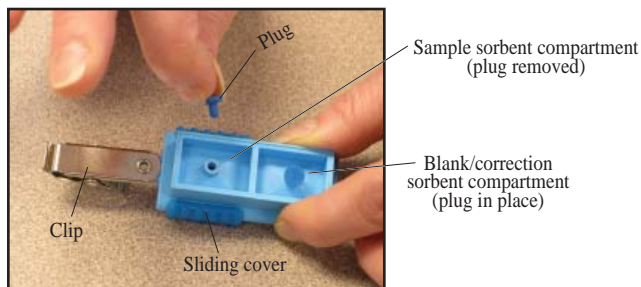




ULTRA III Passive Samplers with Charcoal Sorbent (Solvent Extraction) Cat. No. 690-105

Analysis

1. Remove sampler from resealable pouch.
2. Lay sampler on flat surface with back of sampler facing upward.
3. **With clip oriented to the left**, remove plug from compartment containing sample sorbent (on left side, immediately above diffusion holes).



4. Hold sampler over a 3.7-ml glass vial. Use a larger vial if using more than 2 ml of solvent.
5. Transfer sorbent to vial by tipping the sampler upside down over the vial. Gently tap the sampler to remove any remaining sorbent.
6. Add typically 2 ml of desorption solvent to sorbent in vial.
⚠ Add solvent slowly.
7. Shake sorbent for 30 minutes.
8. Analyze sample by gas chromatograph with the detector specified in the method for the compound of interest.
9. Analyze the blank/correction sorbent, as needed, by repeating Steps 2 through 8.

Calculations

$$C = \frac{[(SW) - (BW)] (24.45 \times 10^6)}{(DE) (MW) (SR) (MIN) (PT)}$$

Where:

- C = Concentration of chemical (ppb)
- SW = Sample weight by analysis (μg)
- BW = Analyte weight in blank (μg)
- PT = Pressure/temperature correction (see below)
- DE = Desorption efficiency (see below)
- MW = Molecular weight of chemical
- SR = Sampling rate (ml/min)
- MIN = Sampling time (minutes)

The equation above is correct for 25 C (298 K) and standard atmospheric pressure (760 mm Hg). To convert to other temperatures and pressures the correction factor is:

$$PT = (T_1/T_2)^{1.5} (P_2/P_1)$$

Where:

- T_1 = Sampling site temperature (in kelvin)
- T_2 = 298 K
- P_1 = Sampling site pressure (in mm Hg)
- P_2 = 760 mm Hg

Desorption efficiency should be determined and expressed as a decimal (e.g. 98% = 0.98).

For sampling rates and desorption solvents, go to www.skcinc.com/PassiveGuide/default.asp.

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