SKC

Analysis Instructions

863 Valley View Road, Eighty Four, PA 15330
724-941-9701 • skcinc.com

ULTRA Passive Samplers with or without Blank, Containing Anasorb® CSC Sorbent (Solvent Extraction)

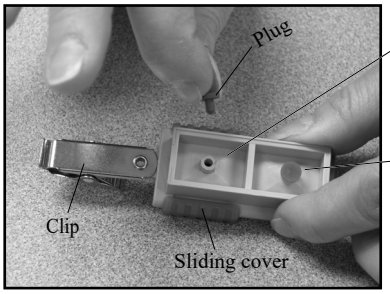
Cat. No. 690-105, 690-105-NB, or 690-205

Analysis

1. a. **For Cat. No. 690-105 or 690-105-NB (prefilled sampler):** Remove the sampler from the resealable pouch and proceed to Step 2.
   b. **For Cat. No. 690-205 (sorbent in vial):** Remove the lid from the vial and proceed to Step 4.

2. Lay the sampler on a flat surface with the back of the sampler facing upward.

3. **With the clip oriented to the left,** remove the plug from the compartment containing the sample sorbent (on left side, immediately above the diffusion holes).



Sample sorbent compartment (plug removed)

Blank/correction sorbent compartment (plug in place) (Cat. No. 690-105-NB)

4. Hold the sampler or vial over a 3.7-ml glass vial. Use a larger vial if using more than 2 ml of solvent.

5. Transfer the sorbent to a 3.7-ml or larger vial by tipping the sampler or vial upside down over the vial. Gently tap to remove any remaining sorbent.

6. Add typically 2 ml of desorption solvent to the sorbent in the vial.

   Add the solvent slowly.

7. Shake the sorbent for 30 minutes.

8. Analyze the sample by gas chromatography 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 for the sampler and Steps 1 and 4 through 8 for the sorbent vial.

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, Sampling Guides, and select Passive Sampling Guide.

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 skcinc.com/warranty.