



Technical Note

SKC 575-002 Passive Sampler 2-Butanone (MEK) Method Summary (200 ppm PEL) Validation to NIOSH Protocol*

PROCEDURE: Adsorption on the Passive Sampler Cat. No. 575-002 containing 500 mg Anasorb® 747 with desorption (in situ) with 2 ml 5% 2-butanol in carbon disulfide and analysis by gas chromatography with flame ionization detection.

SAMPLING RATE: 17.1 ml/min tested for linearity over the range of 7.5 minutes to 12 hours.

ANALYTICAL RECOVERY:	% Recovery	% RSD**	Validation Range	
			(mg)	(8-hour TWA ppm)
	100	0.80	0.47 to 10	20 to 400

STORAGE: Samples, which were collected for eight hours at the PEL at 80% RH (25 C), can be stored for 25 days at freezer (-8 C) temperatures with no loss in recovery. Precautions must be taken when stored at room temperature (25 C). Recovery was reduced to an average of 76.9% after four days at room temperature. Do not store at room temperature.

HUMIDITY EFFECTS: High humidity conditions (80% RH at 25 C) did not affect the uptake rate or recovery.

LIMIT OF DETECTION: The limit of detection (LOD) as defined by a 3:1 signal to noise to ratio was 5 µg/badge. This corresponds to an LOD in air 0.2 ppm (v/v) based on an eight-hour sample at the validated sampling rate of 17.1 ml/min.

VALIDATION DATE: November 1992

* Sampler passed all criteria of Bi-level Validation to NIOSH Protocol at PEL of 200 ppm.

** Relative Standard Deviation

For More Information Request Research Report Publication No. 1306

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