



Technical Note

SKC 575-002 Passive Sampler Methyl Isobutyl Ketone (MIBK) (50 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 carbon disulfide and analysis by gas chromatography with flame ionization detection.

SAMPLING RATE: 13.5 ml/min tested for linearity over the range of 7.5 minutes to eight hours.

ANALYTICAL RECOVERY:	% Recovery	% RSD**	Validation Range	
			(mg)	(8-hour TWA ppm)
	94.6	7.59	146 to 2630	5 to 100

STORAGE: Samples, which were collected for eight hours at the PEL at 80% RH (25 C), can be stored for 14 days at ambient (25 C) or refrigerator (3 C) temperatures with no loss in recovery.

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 ratio was 5 µg/badge. This corresponds to an air concentration of 0.17 ppm (v/v) based on an eight-hour sample at the validated sampling rate of 13.5 ml/min.

VALIDATION DATE: June 1993

* Sampler passed all criteria of Bi-level Validation to NIOSH Protocol at PEL of 50 ppm.
** Relative Standard Deviation

For More Information Request Research Report Publication No. 1304

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