

LITERATURE CORNERQUANTITATIVE RECOVERY FROM URINE USING SEP-PAK® CARTRIDGES - HERE'S PROOF!

The success of a chromatographic assay of a urine sample frequently hinges on a preliminary treatment to eliminate interfering substances. In their paper (1) the authors used SEP-PAK® C₁₈ cartridges to clean up samples for subsequent analysis by thin-layer chromatography of tryptophan and indole metabolites in urine extracts. They concluded that "The use of the SEP-PAK® cartridges for urine extraction had several advantages... It provided chromatographically cleaner extracts because of the partial separation which it produced and effected a significant time saving for extraction because it was a single operation. Moreover, the extraction efficiency was at least equal to that of the solvent extraction methods, the recovery of all indoles being approximately 100%."

TABLE I

RECOVERIES OF THE TESTED COMPOUND FROM SEP-PAK® C₁₈ EXTRACTION

EACH RESULT REPRESENTS THE AVERAGE OF FIVE ASSAYS

<u>Compound</u>	<u>Theoretical Content (µg)</u>	<u>RECOVERY</u>	
		<u>µg (mean ± S.D.)</u>	<u>%</u>
5-Hydroxytryptophan	55	52.7 ± 1.2	95.8
5-Hydroxyindolyl-3-acetic acid	47.5	48.2 ± 1.1	101.4
Tryptophan	51.0	50.2 ± 0.8	98.4
Indolyl-3-acetic acid	17.5	17.1 ± 0.6	97.7
Indolyl-3-butyric acid	20.0	20.3 ± 0.8	101.5
5-Hydroxytryptamine	70.0	68.2 ± 1.7	97.4
Tryptamine	40.0	39.4 ± 1.2	98.5

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1. D. Tonelli, E. Gattavecchia, and M. Gandolphi, J. Chromatography, 231, 283-289 (1982)