Thesis Title Investigation of Hippuric Acid in Vapour Exposure by High-Performance Liquid Chromatography and Colorimetry

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ABSTRACT

Urinary hippuric acid level is useful in the diagnosis of solvent or thinner exposure. Several methods can be used in Toxicology Laboratory. In this study, colorimetric methods: benzene-sulfonyl chloride (BSC) and p-dimethylamino benzaldehyde (DAB) methods were used and were compared to high-performance liquid chromatographic (HPLC) method, studied in non-exposed or normal subjects, industrial worker, and exposed persons. The exposed persons composed 2 groups: teenager gangsters and patients. In the normal group, correlation coefficient of BSC and DAB methods compared to HPLC method were 0.96121 and 0.97682, respectively. When compared hippuric acid levels in exposed and non-exposed group, there was a significantly different ($p<0.01$). Reference value in normal group determined by DAB and HPLC methods were 180-1,500 and 150- 1,400 μg/ml with the means of percent recovery 93.8 and 105.4, respectively.