

SHORT COMMUNICATION

RELATIONSHIP BETWEEN THE LEVEL AND TIME OF EXPOSURE TO TOBACCO SMOKE AND URINE NICOTINE AND COTININE CONCENTRATION

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The study attempts to evaluate whether it is possible to determine time and level of exposure of rats to tobacco smoke based on nicotine and cotinine content in urine.

The animals were exposed to tobacco smoke by inhalation in a specially designed experimental chambers. The exposure to three different tobacco smoke levels (500, 1000 and 1500 mg CO/m³ of air) lasted 6 h per day, for one, three and five days. Nicotine and cotinine concentrations were measured in daily urine using high performance liquid chromatography procedure developed by the authors.

It has been shown that cotinine but not nicotine can be used as a biomarker of time and extent of exposure to tobacco smoke.

Key words: *cotinine, nicotine, tobacco smoke, biomarkers*