

1: [Zentralbl Hyg Umweltmed.](#) 1992 Feb;192(5):455-61.[Links](#)

[Formic acid in urine--a significant parameter in environmental diagnosis?]

[Article in German]

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Reference intervals of formic acid excretion in urine of healthy occupational unexposed adults were determined. Within the range of specific gravity between 1.016-1.032 g/cm³ normalization by creatinine or gravity is unnecessary. The mean formic acid concentration in urine of female and male adults aged 20-80 years was 21 mg/l +/- 30 mg/l (95. percentile 60 mg/l) with slightly higher values in elder persons. Smoking and dietary habits had no influence on formic acid excretion but age was positively correlated with increased concentrations. An oral methanol intake of 10 mg/kg body weight had no significant impact on urine excretion of formic acid. Excretion in the general population is determined by endogenous metabolism of amino acids, purine- and pyrimidine-bases rather than the uptake and metabolism of precursors like formaldehyde. Hence in contrast to recent recommendations in environmental medicine, formic acid in urine is not an appropriate parameter for biological-monitoring of low level exposure to formaldehyde.

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