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Letter to the Editor

Determination of catecholamines in body fluids

Sir,

In a recent paper, Mefford et al. [1] have described a novel approach for the determination of catecholamines in different biological samples. In this approach, Igepon T-77 has been used as an ion-pair reagent to improve the specificity of chromatographic separation allowing the determination of catecholamines by a simple one-step alumina extraction of a complex matrix like urine. Examination of Figs. 6–8 of this publication shows that extracts of all human or rat samples contain relatively large amounts of epinine (peak No. 3). However, a chromatogram of a blank has not been shown to exclude the possibility of peak No. 3 being extraneous. The reported presence of epinine in such large amounts in both human and rat samples is a new observation and of clinical significance. It will be extremely useful if the authors present additional independent evidence about the identity of peak No. 3 of Figs. 6–8 as epinine and provide any literature citation which may indicate the expected concentration of this biogenic amine in different biological fluids.

We have analyzed a number of human plasma and urine samples using double extraction and conventional ion-pair reagents. However, we did not detect epinine in any significant amount even in samples which had elevated amounts of epinephrine and norepinephrine. In fact, epinine is used as an internal standard in some of the liquid chromatographic procedures for the determination of urinary catecholamines because of lack of reports of its presence in human plasma or urine.

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1 I.N. Mefford, M. Ota, M. Stipetic and W. Singleton, J. Chromatogr., 420 (1987) 241.

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