Error in the Article: “Driving Under the Influence of Opiates: Concentration Relationships Between Morphine, Codeine, 6-Acetyl Morphine, and Ethyl Morphine in Blood”

To the Editor:

We read carefully the very interesting article by Jones et al. (1), which appears in the latest issue of the Journal. To our surprise, we realized that, during the determination of opiates in blood, although the described derivatization procedure involves BSTFA, the authors use, for their qualitative and quantitative analysis, mass fragments that correspond to their pentafluoro-derivatives and the respective pentafluoro-deuterated internal standards \(m/z 414/417\) (qualifier ions 361 and 577) for morphine, \(m/z 445/448\) (qualifier ion 282) for codeine, \(m/z 414/417\) (qualifying ions 361 and 473) for 6-AM, and \(m/z 459/448\) (qualifier 296 and 430) for ethyl morphine.

Nevertheless, for the determination of 6-AM in urine, the correct mass-to-charge ratio of the 6-AM trimethylsilyl ester derivative was used (399/402).

This mistake should be corrected as it is a significant flaw in an otherwise excellent article.

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Reference


The Author’s Reply

The article on driving under the influence of opiates that recently appeared in JAT contained an error concerning the reagents used to make derivatives before GC–MS analysis. For the determination of opiates in blood, PFPA derivatives were prepared (1), and the mass fragments for quantification and the qualifier ions refer to these derivates as correctly pointed out by Drs. Papoutsis and Athanaselis. For the analysis of 6-acetyl morphine in urine, a BSTFA derivative was used, and the mass fragments quoted refer to that derivative, except that one of the qualifier ions should have been \(m/z 287\) and not \(m/z 286\). Although the article in question was not meant as a methods paper, I appreciate our colleagues bringing this matter to my attention.

A.W. Jones

Reference