

## Author's Accepted Manuscript

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PII: S0039-9140(18)30868-3  
DOI: <https://doi.org/10.1016/j.talanta.2018.08.057>  
Reference: TAL18978

To appear in: *Talanta*

Received date: 21 July 2018  
Revised date: 18 August 2018  
Accepted date: 22 August 2018

Cite this article as: Elisangela de Souza Santos, Eliani Spinelli, Antonio Assis Vieira and Silvana Vianna Rodrigues, Postmortem analysis of famprofazone and its metabolites, methamphetamine and amphetamine, in porcine bone marrow, *Talanta*, <https://doi.org/10.1016/j.talanta.2018.08.057>

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**Postmortem analysis of famprofazone and its metabolites,  
methamphetamine and amphetamine, in porcine bone marrow**

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**ABSTRACT**

Forensic toxicologists typically work with body fluids, such as blood and urine, or visceral tissues. The analysis of alternative samples, such as bone marrow, can be requested when the commonly used samples are unavailable due to an extended time lapse between the time of death and collection of the material to be analysed. In this study, a method for the analysis of the lipophilic drug famprofazone (FA) and its metabolites, methamphetamine (MA) and amphetamine (AM), in bone marrow was developed, validated and applied to bone marrow from pigs given controlled doses of famprofazone. This method involves enzymatic bone-cleaning, fragmentation of the bones with the assistance of a micro electric motor, optimization of clean-up and LLE (liquid/liquid extraction) conditions and determination by GC/MS. After evaluation through statistical tests, such as Shapiro Wilk for normality and Cochran for homoscedasticity, a linear model was applied in the range of 100 (LOQ) – 2000 ng g<sup>-1</sup>. Inter-day precision and bias was always < 4.6 %. In real sample analysis, bone marrow FA and MA concentrations ranged from 105 to

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