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L.S. Castillo-Peinado, M.A. López-Bascón, A. Mena-Bravo, M.D. Luque de Castro, F. Priego-Capote



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**Determination of primary fatty acid amides in different biological fluids by LC–MS/MS in MRM mode with synthetic deuterated standards: influence of biofluid matrix on sample preparation**

**L.S. Castillo-Peinado<sup>a,b,c,d</sup>, M.A. López-Bascón<sup>a,b,c,d</sup>, A. Mena-Bravo<sup>a,b,c,d</sup>, M.D. Luque de Castro<sup>a,b,c,d</sup>, F. Priego-Capote<sup>a,b,c,d\*</sup>**

<sup>a</sup>Department of Analytical Chemistry, Annex Marie Curie Building, Campus of Rabanales, University of Córdoba, Córdoba, Spain.

<sup>b</sup>Maimónides Institute of Biomedical Research (IMIBIC), Reina Sofía University Hospital, University of Córdoba, Córdoba, Spain.

<sup>c</sup>University of Córdoba Agroalimentary Excellence Campus, ceiA3, Córdoba, Spain.

<sup>d</sup>CIBER Fragilidad y Envejecimiento Saludable (CIBERfes), Instituto de Salud Carlos III, Spain.

\*Corresponding author: F. Priego-Capote (feliciano.priego@uco.es). Phone and fax: +34957218615

**ABSTRACT**

The recent growing interest in primary fatty acid amides (PFAMs) is due to the broad range of physiological effects they exhibit as bioindicators of pathological states. These bioactive lipids are usually in biological samples at the nanomolar level, making their detection and identification a challenging task. A method for quantitative analysis of seven main PFAMs (lauramide, myristamide, linoleamide, palmitamide, oleamide, stearamide and behenamide) in four human biofluids —namely, urine, plasma, saliva and sweat— is here reported. Two sample preparation procedures were compared to test their efficiency in each biofluid: solid-phase extraction (SPE) and protein precipitation. The latter was the best for plasma and urine, while the analysis of saliva and sweat

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