

## XV Reunión Científica de la SECyTA y VII Reunión Nacional de la SEEM

### XV SECyTA 2015

#### ***Analysis of benzophenone-uv filters in human milk samples using ultrasound-assisted extraction and clean-up with dispersive sorbents followed by UHPLC–MS/MS analysis***

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I have selected the poster entitled “Analysis of benzophenone-uv filters in human milk samples using ultrasound-assisted extraction and clean-up with dispersive sorbents followed by UHPLC–MS/MS analysis” as my interest is focused in the control of residues in environmental and food matrixes and in the development of new sample treatments.

Nowadays several studies show increasing evidence that benzophenone-uv filters are able to interfere with the endocrine system. For this reason, analytical methodology for the monitoring of the residues of these compounds in human milk is of great interest in order to control the possible negative effect that their presence could produce on baby health. In this work the authors have developed a new sample preparation method for the determination of 5 benzophenone-UV filters, previous to the analysis by UHPLC–MS/MS. The authors propose the lyophilization of the sample prior to the extraction by ultrasound with acetonitrile and a clean-up step with a mixture of dispersive-SPE sorbents (C18 and PSA) in order to reduce matrix effects produced by coextracted milk components, mainly proteins, sugars and lipids.

With this method the authors have demonstrated the applicability of this sample treatment to different human milk samples collected from volunteers lactating of the province of Granada (Spain). Moreover this methodology has demonstrated to be useful for biomonitoring of these commonly used UV-filters and for the development of more in–depth studies on the prenatal exposure.

### VII SEEM 2015

#### ***Breath Analysis: Transitioning from Bench to Bedside***

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From my point of view, one of the most eye-catching keynote has been that entitled “Breath analysis: transitioning from bench to bedside”. The main reason is that the authors have developed a methodology for disease diagnosis and drug monitoring analyzing the breath in real-time. Nowadays the analysis of breath have been less explored than other biological matrixes, for this reason the analysis of exhaled breath contains relevant metabolites is of great interest because it may reflect the biochemical activity within a subject.

For this purpose, the authors have modified the entrance of a commercial quadrupole time-of-flight mass spectrometer to allow the analysis of breath via secondary electrospray ionization-mass spectrometry. On the one hand they have studied exhaled metabolic changes produced by obstructive sleep apnea in a randomized controlled trial and for the other hand, breath levels of ketamine and its main metabolites in mice injected with ketamine.

This keynote demonstrate the potential of this analysis tool because this methodology may contribute to address some of the most relevant clinical and pharmacological problems, which are currently investigated through the analysis of body fluids other than breath.

**Carmen Tejada Casado**