

5<sup>th</sup> Edition of International Conference on

Polymer Science and Technology

10<sup>th</sup> International Conference and Expo on

Separation Techniques

July 30-31, 2019 | Amsterdam, Netherlands

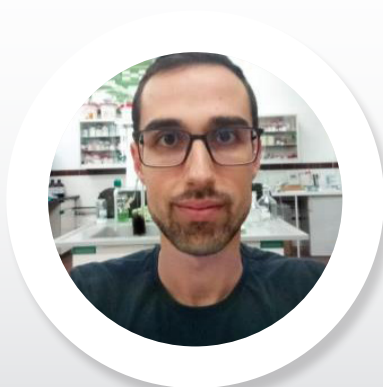
### Development of a deep eutectic solvent-based extraction procedure followed by high performance liquid chromatography-UV-tandem mass spectrometry detection for plastic migrants determination

Plastic migrants are substances present in plastic materials which are non-chemically linked to the polymeric matrix and, therefore, can be released to the environment or food samples. Due to their harmful effects on health and ecosystems, it is necessary to develop environmentally friendly analytical methods for their determination in samples of interest, even at low levels of concentration. In this sense, deep eutectic solvents (DESs), based on a mixture of a hydrogen bond donor (HBD) and a hydrogen bond acceptor (HBA), represent an interesting alternative to conventional extraction solvents. Introduced by Abbott et al. [1] in 2003, they are generally composed of quaternary ammonium or phosphonium salts, as HBAs, and carboxylic acid, amines, amides or alcohols, as HBDs. In this work, a new, simple, fast and efficient method based on the use of a choline chloride-based DES, as green solvent, has been developed for the extraction of a group of eight plastic migrants in different beverages. Separation and quantification were carried out by high performance liquid chromatography coupled to a diode-array detector system. The extraction procedure was successfully validated obtaining recovery values in the range 85-120 %, as well as limits of detection of the method in the range 5.1-17.8 µg/L. With the aim of evaluating the applicability of the development methodology, the presence of target analytes in beverages such as tea drinks, apple soft drinks and pineapple juices was evaluated. The analytes detected in samples were confirmed by mass spectrometry.

### Biography

Álvaro Santana-Mayor is a PhD student at the Department Unit of Analytical Chemistry of the University of La Laguna (ULL) located in Tenerife (Canary Islands, Spain). In 2016 and 2017, he finished his Bachelor and Master's degrees in Chemistry, respectively, at the same university. Nowadays He is developing his PhD studies about the determination of compounds with endocrine disrupting activity by advanced analytical techniques combined with conventional and/or alternative extraction techniques in environmental and agri-food samples.

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