Cosmetic ingredients: From the cosmetic to the human body and the environment

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Current social demand for cosmetic products in the developed countries has prompted the cosmetics industry to achieve a leading position within the chemical industry. That is why health authorities are increasingly concerned by this sector, regulating these products, not only to ensure the safety of users but also to ensure their effectiveness. Therefore, quality control in the cosmetic industry is demanded. However, there are not reference analytical methods enough to cover the needs of this sector, so the cosmetics industry is continually requiring the development of analytical methods. Moreover, prohibited substances could be present at trace levels, as they are not intentionally added to the product, but are formed during the manufacturing process. Therefore sensitive analytical methods, in addition to accurate and precise, are needed. Furthermore, studies show that some cosmetic ingredients can be absorbed through the skin and penetrate into the human body, which can be metabolized and/or excreted and even bioaccumulated. Studies are rather scarce in this field as a result of having not analytical methods for determining the cosmetic ingredient and its metabolites at trace levels in biological fluids. Finally, there are several studies that show that cosmetic ingredients reach the aquatic ecosystem causing adverse effects on flora and fauna. Therefore the development of sensitive analytical methods for determining cosmetic ingredients at trace levels on the environment is of great interest from the surveillance environmental point of view. The purpose of this presentation is to provide an overview of the analytical contributions of our group in this three interesting fields.

Biography

Alberto Chisvert (BSc, Faculty of Chemistry, University of Valencia, 1999; PhD, Dept. of Analytical Chemistry, University of Valencia, 2003). He is Associate Professor of the Dept. of Analytical Chemistry of University of Valencia. At present, he has published more than 60 articles in reputed journals, and more than 10 book chapters. Moreover, he is the Co-Editor of the book Analysis of Cosmetic Products (Elsevier, 2007). He is Editorial Board Member of Advances in Analytical Chemistry, American Journal of Analytical Chemistry, Chromatography Research International, International Journal of Analytical Chemistry and Journal of Trace Analysis in Food and Drugs, and is a regular reviewer of more than 27 journals. His research areas are focused on both liquid and gas chromatography coupled to mass-spectrometry, liquid- and solid-phase microextraction, in bioanalysis and cosmetic, pharmaceutical and environmental analysis.

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