

March 12-13, 2018  
London, UK

Jean-Francois Bienvenu, Int J Drug Dev & Res 2018, Volume 10

## **MATRIX EFFECT IN LC-MS: SOME NEW ASPECTS IN METHOD DEVELOPMENT AND ANALYSIS**

**Jean-Francois Bienvenu**

Toxicology Center of Quebec, Canada

**T**he effects of the matrix on the analysis may have numerous impacts on the quantification of an analyte. This may lead to confusion on what is actually measured, due to a non-universal terminology used in the scientific literature. In the hope bringing more clarity to the MEs we introduced new terms, and showed the relationship between them. We design a series of experiments to visualize how well the MEs are controlled, and to gain knowledge of where the perceived variations are coming from. The links between the different MEs and descriptors are presented, providing a pathway to follow when doing troubleshooting work. The results obtained with the test, provided information on both the analytes and the internal standards facilitating the analyte/internal standard association for a correct quantification in the sample matrices. The technique presented is applicable to matrices containing a base quantity of the analyte, and to different types of instruments like LC, GC and ICP. This methodology facilitates the decision-making process while lowering the required costs and time.

### **Biography**

Jean-Francois Bienvenu has a Master's Degree in Organic Chemistry from Université de Sherbrooke. He has worked for more than 10 years in the pharmaceutical industry in Canada and the United States. For the last eight years, he has been at the Centre de Toxicologie du Québec (CTQ) where he is involved in the development of new and specialized analytical methods, to assess exposure to heavy metals, solvents and their metabolites, pesticides and other environmental pollutants. With the help of his colleagues at the CTQ, he recently published a paper on matrix effects.

[jean-francois.bienvenu@inspq.qc.ca](mailto:jean-francois.bienvenu@inspq.qc.ca)