Ivo Leito, J Chromatogr Sep Tech 2017, 8:3(Suppl)
DOI: 10.4172/2157-7064-C1-025

Review on validation of liquid chromatography–mass spectrometry methods

Ivo Leito
University of Tartu, Estonia

The presentation gives an overview of the recently published two-part tutorial review on validation of liquid chromatography–mass spectrometry methods. The tutorial review presents the state of the art of method validation in liquid chromatography mass spectrometry (LC–MS), especially with electrospray ionization (LC-ESI-MS), and discusses specific issues that arise with MS (and MS-MS) detection (i.e. LC-MS-MS) in LC (as opposed to the conventional detectors). The review addresses and compares all the major validation guidelines published by international organizations: ICH, IUPAC, AOAC, FDA, EMA (EMEA), Eurachem, SANCO, NordVal and the European Commission Decision 2002/657/EC. With every performance characteristic, the tutorial review briefly compares the recommendations of the guidelines, to a large extent on the basis of the experience of the authors. All important method performance characteristics are discussed. With each of them its essence and terminology are addressed, the current status of how to treat it is reviewed and recommendations are given, how to determine it, specifically in the case of LC–MS methods. A possible step by step validation plan specifically suitable for LC-MS-MS concludes the review.

Biography

Ivo Leito works as a Professor of Analytical Chemistry at Institute of Chemistry, University of Tartu. His main research directions are on the borderline of analytical chemistry with other disciplines: Chemistry of super-acids and super-bases; metrology and quality assurance in chemistry (MiC); liquid chromatography and mass spectrometry; sensors and their metrological characterization; applications of instrumental methods in analysis of historical objects. He teaches analytical chemistry and its metrological aspects at University of Tartu (UT) and has been involved in setting up several international MiC-related educational activities.

ivo.leito@ut.ee

Notes: