

Current Challenges in Bio-Metrology: The JRC Support to Food Safety

Plática Plenaria

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ABSTRACT

Food safety is one of the top priorities of the European Commission. A large part of food and feed law in the EU deals with limits for content of contaminants, residues and additives in food and feed. Monitoring compliance with those rules must be done on a reliable basis to allow sound risk management. The analyst in the field of food safety today is frequently faced with measuring complex biological systems and molecules in food and feed matrices and a huge range of analyte/matrix combinations. Like in many other areas of measurements and testing, there is a great need for internationally accepted quality assurance tools to ensure comparability of the monitoring results.

There is also a consensus on the need to implement basic metrological concepts like traceability and measurement uncertainty in the area of bioanalysis to build a sound basis for monitoring and control as well as research and development. Frequently, however, the application of metrological principles is hindered simply by e.g. a lack of clarity about the target of the intended measurement process. Unclear definition of a measurand in turn represents a major problem for the development, certification and proper use of reference materials, needed for ensuring metrological traceability to a common reference.

The European Commission's JRC Institute for Reference Materials and Measurements (IRMM) develops and produces reference materials, develops, validates and tests analytical methods and organises interlaboratory comparisons. This presentation will cover the activities at JRC-IRMM on bio-metrology for food & feed safety and quality measurements, focusing on genomics and proteomics. Moreover, socio-economic aspects will be illustrated on the example of the establishment of a reliable system for prion testing.