Analytical methods for novel food and food ingredient analysis

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The European Union is recognised worldwide to have a high quality and safety food standard, ensuring the protection of the health and consumer interest of the European citizens while allowing the well-functioning of the single market. This is underpinned by the General Food Law (Regulation (EC) No 178/2002), which sets the basic safety principles and defines the roles of food-business operators, national authorities and the European Food Safety Authority (EFSA), and by specific legislations e.g Regulation (EC) No. 1333/2008 on food additives, Regulation (EU) 2015/2283 on novel food and Regulation (EU) No. 1169/2011 on food information to consumers.

Member States are responsible for ensuring compliance and to enforce existing EU food law through official controls and control laboratories.

A key challenge is dealing with the analysis and potential concerns surrounding nanoscale materials in food by developing methods to extract, identify and characterise them. This is due to a lack of validated analytical methods and certified reference materials, as well as insufficient technical and analytical capacity and knowledge in the laboratories responsible for compliance testing.

The Joint Research Centre, in collaboration with the Directorate-General for Health and Food Safety (DG SANTE) addresses some of these shortcomings and supports Member State competent authorities in the implementation and enforcement of the current nanomaterials-related food legislation.

The presentation provides a general overview on the above activities with examples and the related analytical techniques used for nanomaterial analysis and processed food contaminants.

Short bio:

Hind El Hadri holds a PhD in analytical chemistry and environment and has expertise in several areas related to the development of analytical methods for the detection and characterisation of nanoparticles, micromaterials, and other contaminants in various matrices. She is currently a researcher at the Joint Research Centre of the European Commission with a special focus on food and novel foods research to support the implementation of EU legislation.