

## **Fingerprinting technology to detect mycotoxins in foods and liquid foodstuffs :**

**Article: On 19 November 2013 the EU-research project MYCOSPEC was launched with the participation of SMEs of the cereal industry and research centers.**

MYCOSPEC project, coordinated by [IRIS](#), Castelldefels, Spain, aims to develop an innovative system to detect mycotoxins, toxins produced by fungi that infest food crops and processed foods. Food contaminated with mycotoxins can cause both acute and long-term illness. The high potential danger of mycotoxins to humans and livestock forces to have strict regulatory controls and makes foodstuff buyers to increasingly demand more rigorous and timely food safety testing.

### **An innovative solution based on infrared spectroscopic fingerprinting technology**

Quantitative and rapid analysis of these toxins is difficult with current analytical methods being costly, time-consuming, and not suited application in the field. The analytical results prone to vary between laboratories, sometimes by orders of magnitude. The MYCOSPEC project will develop an innovative tool based on infrared spectroscopic fingerprinting and novel laser technology leading to faster and more reliable results. The envisaged approach will enable the development of a compact yet highly sensitive tool, which will ensure that larger volumes of the cereals and foodstuffs can be probed, sensitively detected, and quantified. The high information content of infrared spectroscopic analysis combined with multivariate calibration and the powerful compact mid-infrared laser light source (QCL) will provide a novel approach for rapid, high-throughput monitoring of plant main components obtaining rapid information on crop quality and safety essential for screening systems in the food and feed sector.

This two year research project funded by the Seventh Framework Programme of the European Commission will develop a novel technology for the rapid on-site diagnosis of fungal diseases, by joining the efforts of three research centers: Universität Ulm (Germany), Universität für Bodenkultur Wien (Austria), IRIS (Spain), and five industrial SME partners that will contribute to the development and the industrial validation of the technology: ICC (Austria), FULLWELL MILL LIMITED (UK), MG OPTICAL SOLUTIONS GmbH (Germany), CERVESES LA GARDENIA (Spain) and SETBIR (Turkey). [ICC Services GmbH](#), the business branch of ICC - International Association for Cereal Science and Technology (founded in 2005) is partner in the MYCOSPEC consortium and will be responsible for dissemination of project results mainly to the benefit of SMEs.

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