

Science & Research: JRC

Joint Research Center [European Union]

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The JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing knowledge with the Member States, the scientific community, and international partners.

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The detection of genetically modified organisms in food and feed products is a complex multi-step analytical process.

A Decision Support System (DSS) based on the newly developed "prime number" algorithm is able to determine the nature of the GMO.

The DSS to determine the presence of the GMO's was built with Luna decision, the CPM software

The Goal

Determine if a GMO is present in a specimen and if its quantity is allowed by the EU. Results are presented after the definition of the acceptance criteria and validation of the reference specimens.

EGMolan™ DSS

- The trademark of EGMolan™ DSS is the property of the European Union - Joint Research Center which created the algorithms for the validation of the test results on organic material
- The algorithms are based on the original Paper "Analit Bioanal Chem (2010) 396:2113-2123 - "A theoretical introduction to Combinatory SYBR(R)Green qPCR Screening (...)" by Marc Van Den Bulcke et al.
- Hicare Research integrated the DSS via the Luna decision tool, which allowed analysis on several hierarchical levels (Species - Producers – GMO's) along with several dimensions (GMO's, Methods, Measures...)
- The DSS is accessible via the www, intranet or standalone PC

