Honey authenticity

Analytical method for fraud detection

In the resolution of January 2014*, members of the European Parliament drew up a list of products that are most at risk of food fraud. Honey is included in their list.

The most common fraud in honey is adulteration, usually by addition of sugar. However other types of fraud exist, for example the false declaration of botanical or geographical origin. Perfect traceability is therefore crucial for honey and other products from the hive to ensure a fair and sustainable beekeeping sector.

A unique and reliable method

The Eurofins Laboratory in Nantes has developed a new analytical technique to test different kinds of honey. Developed as part of a collaborative research project, this method significantly improves the detection of adulteration.

The technique used is high resolution Nuclear Magnetic Resonance (NMR) profiling. This is an innovative high-throughput technique, providing a wide range of information that is both targeted (quantification of defined substances) and non-targeted (identifying deviations from reference spectra).

Applied to honey, this analytical method can simultaneously:

- Detect the addition of exogenous sugars (from whatever source: cane, corn, beet, wheat, rice, etc.).
- Confirm the floral origin of honey declared on the product’s packaging (single-flower honeys)
- Detect various irregularities such as excessive heat treatment (determination of 5-HMF) or fermentation
- Quantify the main sugars (glucose, fructose, sucrose)

Advantages of Eurofins method

- An innovative and unique performance compared to other analytical methods on the market: detecting fraud cannot be circumvented by the use of sugar syrups with no isotopic or molecular “markers”
- A global spectral fingerprint that can detect both fraud and possible alterations, thus avoiding additional analyses
- An efficient analysis that requires little sample preparation
- High reliability of the results as they are compared to global database of authentic honeys
- A method suitable for all kinds of honey (honey from flowers and honeydew, mono or poly-floral)
- A laboratory with a recognized experience of 25 years in food authenticity testing

Additional analyses

For a complete monitoring of honey products, Eurofins also offers tests to check the geographical origin of honey (multi-isotope analysis).

Our laboratories also have a comprehensive portfolio of powerful analytical techniques to help clients monitor the safety, composition, authenticity, origin, traceability and purity of food products.


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