



NIAS

Besides functional additives or other additives produced by paints and inks, food contact material may contain **non-intentionally added substances (NIAS)** originating from polymer and additive degradation or impurities in raw material.

LEGISLATIVE FRAMEWORK

NIAS were first mentioned in Reg. (EU) 10/2011 and defined in the risk assessment guide lines drawn up by ILSI Europe.

NIAS FEATURES

NIAS are not preventable, nor can they always be determined a priori. However, like any other food contact material, they must not alter the product or be harmful to health.

The producer is responsible for monitoring the presence of NIAS and assessing their impact on food safety.

NIAS can be **predictable** (based on the type of material and the conditions of use of the packaging) or **unpredictable**. For this reason, Mérieux NutriSciences has developed two different analytical approaches:

- **targeted**, for specific, predicted substances;
- **untargeted**, for any potential migrating substance.

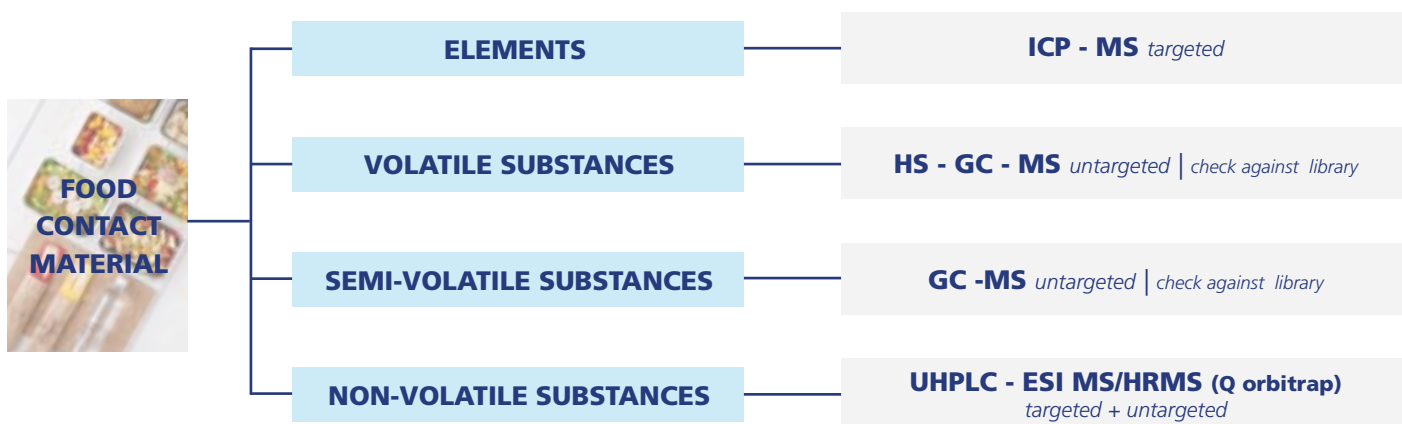


Laboratories Mérieux NutriSciences



ANALYTICAL METHODS

Our experts propose four analytical approaches for the determination of the different types of NIAS.



NON-VOLATILE SUBSTANCES

Detecting non-volatile NIAS may be very challenging because of the large number of newly-produced additives.

Mérieux NutriSciences meets the increasing demand for detection of non-volatile substances through a **3-step approach** which implies the use of liquid chromatography with high-resolution mass spectrometer (**UHPLC ESI-MS/HRMS, Q-Orbitrap**). The suggested analytical method guarantees high resolution, increased accuracy and access to a library which is constantly updated.

1. Quantitative **TARGETED** analysis, specific migration of the typical contaminants of the packaging.
2. Semi-quantitative **TARGETED** analysis on 1,500 more substances.
3. Semi-quantitative **UNTARGETED** analysis of molecules which have not been identified in the previous steps, and possible further examination of the mass spectra obtained.

The risk assessment analysis includes the search for reference research projects, study of guide lines and toxicological tests.

For more information, please contact our Food Contact Experts by phone at +39 0423 7177 or by e-mail at packaging.italy@mxns.com



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