Because you care about CONSUMERS’ HEALTH

Coffee Capsules: from Safety to Sustainability

The coffee capsules’ market is nowadays a global, consolidated, constantly growing and economically relevant market. The coffee capsule has a double function: it contains the coffee powder and it represents a way to dispense the beverage. In this phase the capsule is subjected to variable conditions of thermal and physical stress that can influence the characteristics of the final product.

We can define different aspects which will be important to ensure market success of the product: both food contact safety and consumer’s health are missions to be pursued by the producers, but we have to consider also other aspects like the capsule’s design, that can affect the sensory suitability of the beverage, and the eco-sustainability, that can give to the product an added value necessary to improve its market share: green capsules made of biodegradable and compostable plastics, that are more environmental friendly and available nowadays in many countries, are indeed a perfect example.

To support its clients, Mérieux NutriSciences offers a complete range of analytical services dedicated to the safety and the sustainability of the Food Contact Materials:

**Safety**

Mérieux NutriSciences’ laboratories offer a wide range of services to verify the safety requirements of the Food Contact Materials, including the coffee capsules and the machines that dispense the beverage.

- Migration tests that simulate the storage phase of powdered coffee
- Migration tests that simulate the delivery phase
- Nias search by non-target screening approaches (extraction, specific migration)
- Technological suitability
- Analysis of the dispensed coffee
- Analysis of the powdered coffee (shelf life)
- Packaging and dispensed coffee sensory tests
- Screening of metals on coffee or simulants in compliance with standard legislation or custom protocols related to specific needs.

Our complete services related to materials and foods:

- **Migration Tests**
- **Non-target screening**
  Tests to identify volatile, semi-volatile and non-volatile contaminants
- **Food suitability of systems like coffee machines and other small appliances**
- **Food suitability of aluminium, paper, steel and ceramic**
- **Sensory and Consumer Tests**
- **Technological suitability Tests**
- **Technical Service and Risk Assessment**
- **Physico-mechanical Tests**
**Sustainability**

Thanks to its expertise Mérieux NutriSciences is able to perform internally all the prescribed tests of the harmonized UNI EN 13432 European Standard that ensures the compliance with the requirements of the 94/62/EEC European Directive on Packaging.

Mérieux NutriSciences' laboratories are the only one in Italy that can perform the entire analytical biodegradability and composting process in order to obtain the “OK compost” label issued by International Body VINÇOTTE.

Thanks to its complete and customized service, our experts identify the best analytical approach considering the product to be tested and the customer’s needs and in order to satisfy the requirements of the UNI EN 13432 European Standard, we offer the following services:

- **Studies for material characterization and chemical composition – volatile substances, heavy metals, harmful substances.**
- **Biodegradability Studies (ISO 14855):** ultimate degradation to CO2, water and biomass. Within six months it must be reached a biodegradation percentage which is at least equal to 90%.
- **Disintegration Studies (EN 14045 or ISO 16929):** within 12 weeks at least the 90% of the results of the product's decomposition process must be able to get through a sieve of 2mm x 2mm.
- **Quality of Compost and Ecotoxicity Studies:** these studies can verify the absence of negative effects after the contact with the material. In order to comply with the current regulation it’s necessary to carry out chemico-physicals verifications and one germination test (OECD 208).

For further information please contact our Food Contact Experts calling +39 0423 7177 or writing to packaging.italy@mxns.com