



## Paper and cardboard packaging

Paper and cardboard packaging is widely used in the sector of food contact materials as well as in others. The choice of paper is in line with the idea of “sustainable” packaging: in Italy, 4 out of 5 paper packaging are currently recycled.

### »» Food contact

Confirming the suitability of paper and board for food contact use involves the check of **composition and purity requirements**.

Mérieux NutriSciences carries out all suitable analyses:

Composition requirements verification	Purity requirements verification
<ul style="list-style-type: none"><li>• Bulking agents</li><li>• Fibrous material calculation</li><li>• Auxiliary substances</li></ul>	<ul style="list-style-type: none"><li>• Copper migration</li><li>• Fluorescent whitening agents (EN 648)</li><li>• Total PCBs</li><li>• Color fastness (EN 646)</li></ul>

We perform analyses in accordance with the German Recommendation BfR, French legislation and CEPI guidelines.

We also perform all tests to confirm that the **migration of substances from packaging to food is not dangerous to health** or that it does not alter the food contained in the packaging, as recommended by Framework Regulation on food contact.

### »» Sensory analysis

The sensory analysis enables to understand whether the container maintains the organoleptic characteristics of the food unchanged or if they change due to volatile substances migrating into it.

Mérieux NutriSciences performs:

- **odor, after-taste** and after-odor (taint) analysis
- **instrumental analysis** to detect off-flavors defects



## »» Set-off

The use of printing inks applied to materials in contact with food is envisaged by Regulation (EC) no. 2023/2006 (GMP), which provides that the printing surface is not in direct contact with food. In addition, the printing should be placed so that the possible transfer of its constituents is not harmful to the health of the consumer and does not unacceptably alter the organoleptic characteristics of the food.

**Mérieux NutriSciences designed and developed many analytical protocols to evaluate the transfer of substances from printed surfaces to surfaces destined to be in contact with the food:**

- targeted approach: specific migration of known substances used as a marker and being the printing ink
- non-targeted approach: evaluation of ink transfer from the printed surface to the side intended for contact with food
- evaluation of detected substances through comparison with official and extensive bibliographical research

## »» Contaminants

Cardboard packaging may contain certain contaminants coming from **superficial treatment of packaging or that can be found in recycled products**, for example.

**Mérieux NutriSciences performs these analyses:**

- phthalates, BPA and formaldehyde determination
- mineral oils analysis (MOSH and MOAH)
- PFASS determination
- NIAS screening
- heavy metals analysis
- diisopropylphenol and photoinitiator analysis (benzophenone and ITX)
- O-phenylphenol, pentachlorophenol
- microbiological tests (microbiological load, fungi, etc.)

## »» Technological and physio-mechanical suitability

Technological suitability tests, in particular for food contact packaging, confirm **packaging characteristics and multiple functions**: proper storage, food product protection, cooking, heating, freezing (e.g. Ready-to-eat products).

**Mérieux NutriSciences also offers a wide range of services and physical tests such as:**

- resistance: traction, compression, perforation, etc.
- absorption of liquids (capillary ascension)
- brightness level
- product control (weight, dimensions, etc.)

## Sustainability

Paper and cardboard packaging is sometimes preferred for its ability to communicate sustainability: it is **easily recyclable and can be designed to be compostable**. Mérieux NutriSciences propose:

**Mérieux NutriSciences propose:**

- evaluation of compliance with requirements for packaging suitable for organic recycling in accordance with **EN 13432, ISO 18606 and other international standards**
- tests to obtain **TUV Austria and DIN CERTCO** certifications for Europe, North America and Australia
- recycled packaging safety check



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