



Coffee Authenticity

Coffee is a valuable raw material easily subject to food fraud.

One of the most important frauds in grounded coffee is the substitution of Arabica with Robusta variety in coffee blends labeled as 100% Arabica.

COFFEE AND FOOD FRAUDS

Coffea arabica (commonly called **Arabica**) and *Coffea canephora* (generally defined as **Robusta**) from the Rubiaceae family are the two most traded coffee types. Arabica amounts to 70% of total world coffee production, it is more expensive and has higher quality than Robusta.

In case of grounded roasted coffee where coffee beans can no longer be distinguished from the morphological point of view, **one of the main commercial frauds is the addition of Robusta variety to 100% labeled Arabica species. This has wide economic and commercial repercussions** on industries and thus consumers.

How much Robusta in coffee blends

For this reason, it is important to accurately verify the amount of Robusta in coffee blends.

Current detection methods rely on morphological/organoleptic analyses and caffeine quantification, but are **poorly precise because of the intrinsic variability of coffee**, although belonging to the same type (seasonality, geographical origin, etc.).



Method to assess Arabic and Robusta Authenticity

Mérieux NutriSciences has developed a chromatographic method to assess Arabica and Robusta coffee blend authenticity.

The analytical approach relies on the **simultaneous quantification of two independent markers that are properly and specifically correlated together to precisely assess blend composition.**

Mérieux NutriSciences' ACCREDITED method can:

VERIFY THAT CLAIMED 100% ARABICA COFFEE IS TRULY 100%

Accurate determination of the possible presence of Robusta in claimed 100% Arabica coffee, by quantifying **16-O-metilcafestol** marker which is not present in Arabica type, according to **German standard DIN 10779:2011.**

ASSESS UNKNOWN COFFEE BLEND COMPOSITION

The quantification and specific chemometric correlation of two independent markers, **16-O-metilcafestol** and **delta-5-avenasterol**, allow a more accurate measurement than methods currently available on the market, as all **this minimizes intrinsic coffee variability due to different geographic origin, seasonality, etc.**

Mérieux NutriSciences performs a **complete range of tests in coffee:**

- Caffeine content
- Humidity
- Heavy metals
- Pesticides
- Residues of solvents
- Ocratoxin
- Acrylamide
- Furan
- Etc.

Mérieux NutriSciences' method for coffee authenticity is accredited for:

- Grounded coffee
- Raw coffee
- Roasted coffee

For more information, please contact our experts by phone at +39 0423 7177 or by e-mail at food.italy@mxns.com

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