

Basmati Testing & Analysis

Why Cotecna

- > Swiss group founded in 1974
- > Global network of over 3,000 employees in more than 100 offices & certified laboratories across approx. 50 countries
- > Use of E-dox™, an innovative solution to issue digital certificates
- > Efficient and responsive services, customised to clients' needs

Accreditations, Certifications & Memberships

- > ISO 9001:2015
- > ISO 17020:2012 ANAB – for the service of Verification of conformity
- > ISO 17025:2005 – for individual laboratories
- > IFIA – International Federation of Inspection Agencies
- > GAFTA
- > FOSFA

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Value Proposition

Cotecna is a leading provider of testing, inspection and certification services. We offer solutions to facilitate trade and make supply chains safer and more efficient for our clients.

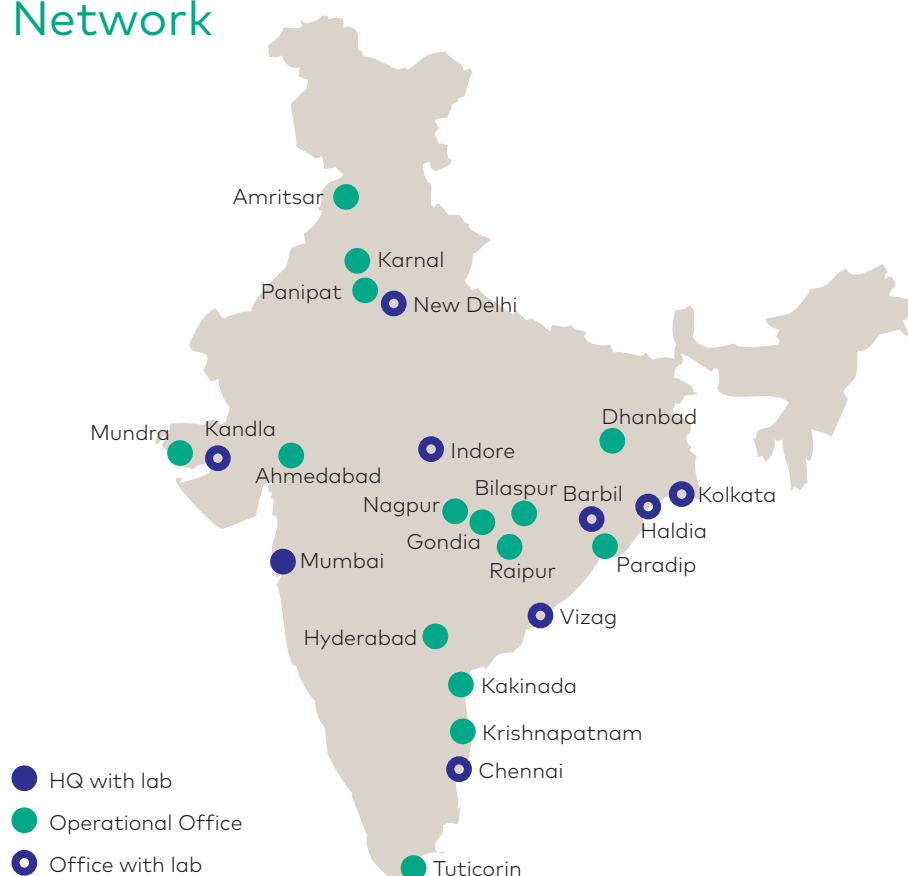
Basmati rice is one of the most important cereal grain crops in India. Ensuring the quality of Basmati is essential in order to protect consumers, as well as guarantee rice yields.

In India, Cotecna offers a complete range of tailor-made services to properly test the quality of your shipments of Basmati rice.

In order to protect your interests, our experienced analysts will establish the complete traceability of your goods.

We use two methods to authenticate Basmati rice: physical analysis and DNA analysis.

Network



DNA Analysis Equipment

> Genetic Analyzer / GeneMapper software for fragment analysis

- Fluorescence-based DNA analysis.
- Instrument uses capillary electrophoresis technology for DNA fragment analysis.
- Instrument facilitates next-generation sequencing.

> End point PCR

> Real time PCR

Physical Analysis Equipment

> **Satake's Grain Scanner** – used to evaluate white & brown rice by analyzing the shape and colour of every kernel from a sample of 1,000 grains, in 60 seconds only!

> **Rice polisher** – used to «polish» kernels to change their appearance, taste and texture.

> **Rice whiteness meter** – used to determine the milling quality and purity of rice.

> **Grain Husker** – used to determine husking yields.

> **Moisture meter** – used to measure moisture content.

Physical Analysis

According to international standards and within a fast turnaround time, our qualified analysts will test all physical parameters.

Visual tests – segregation of grains based on their physical characteristics: shape, length, breadth and overall appearance.

Cooking Tests – segregation of grains based on their typical cooking characteristics: shape, elongation, water absorption, breakage.

Pre-cooking parameters

- > Varietal admixture
- > Average length
- > Average breadth
- > Broken
- > Chalky kernels
- > Immature kernels
- > Foreign matter
- > Degree of whiteness (kett value)
- > Aroma & flavour

Post-cooking parameters

- > Length
- > Separation
- > Cooked breakage
- > Cooking yield
- > Elongation ratio
- > Appearance
- > Stickiness
- > Adulterants added colour
- > Water absorption

Alkali spreading value – incubation of grains in a chemical solution to observe the disintegration of the starchy endosperm and shape over a period of time.

DNA Analysis

PCR-based analysis for the quantification of adulteration

Polymerase Chain Reaction (PCR) is a biochemical technology used in molecular biology in order to amplify a single or a few copies of a piece of DNA (Deoxyribonucleic acid).

DNA analysis is based on a high throughput «single-tube assay» method, followed by the analysis of a capillary-based genotyping and the detection of adulteration.

Value-added

Specific microsatellite profiles of loci for all major Basmati varieties facilitate a unique identification of genuine Basmati from non-Basmati rice.

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