



SPICES

COTECNA
Trust for a moving world



The **global spices** market is experiencing **robust growth**, driven by **increasing consumer demand** for authentic flavors, diversified culinary experiences, and clean-label, sustainably sourced ingredients.

India, often referred to as the “Land of Spices”, **dominates global production and export activity**, cultivating a rich diversity of spice varieties and serving as the single largest supplier to international markets.

Indian spices, ranging from chili and turmeric to cumin and cardamom, are shipped to more than 180 markets worldwide, including the European Union, where they form an essential part of the food ingredients ecosystem

This **global trade ecosystem creates a complex, multi-stage supply chain connecting Indian producers and processors with European buyers, food manufacturers, and retailers**. From cultivation in key Indian spice hubs through quality testing, certification and logistics, to final delivery at European distribution centers, **every link in this chain demands rigorous quality assurance, traceability, and compliance with regulatory standards**.

At **Cotecna**, we are uniquely positioned to support this international value chain — **ensuring safety, quality, and integrity** at every stage, and enabling our partners to meet the highest expectations.

Why COTECNA?



Sampling & Testing

Cotecna Group offers a **unique combination of Testing, Inspection, and Certification (TIC) services supported by a global network of specialized laboratories.** Our approach goes beyond routine analysis — **we help customers anticipate risk, prevent non-compliance, and protect market access.**



Inspection

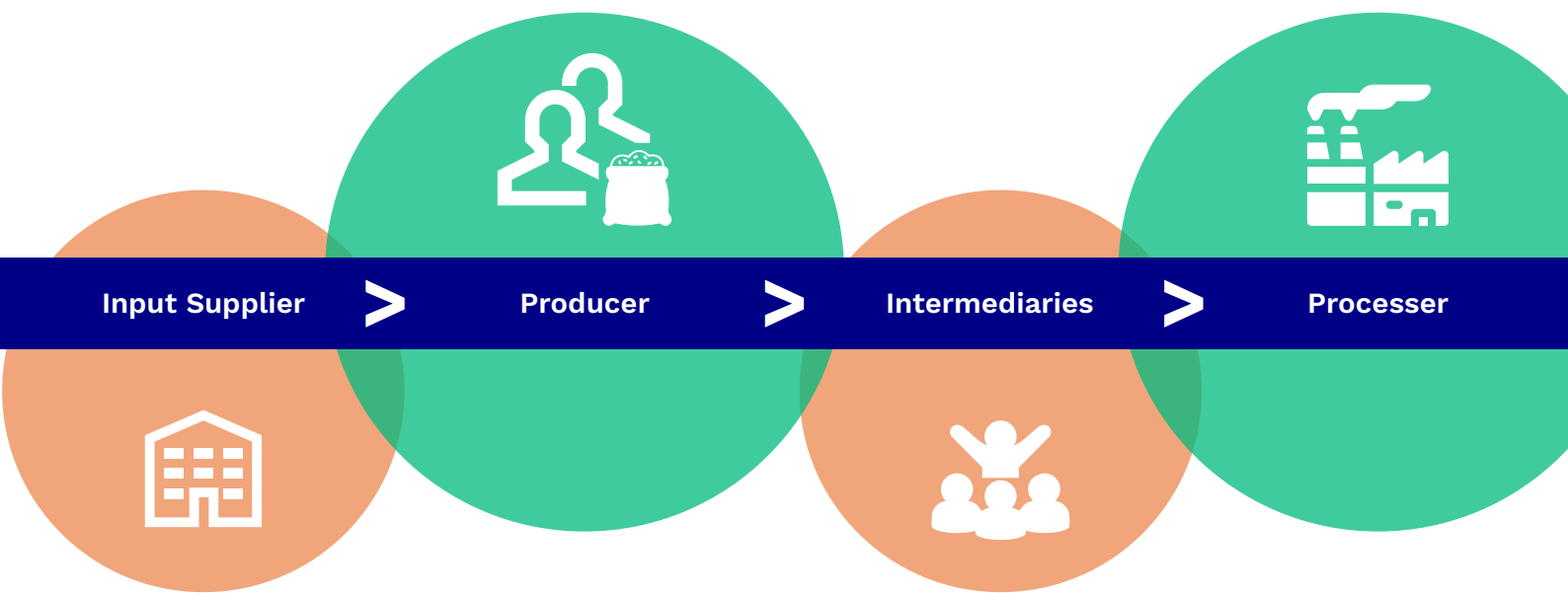
- > **Single trusted partner** across the spices supply chain
- > **At-origin** and **at-destination presence**
- > **Harmonized analytical methods** and data integrity
- > Practical **regulatory guidance**
- > **End-to-end accountability** under one global brand
- > Integrated laboratories across India, Europe, and the Middle East, enabling seamless at-origin and at-destination spice testing and regulatory compliance.



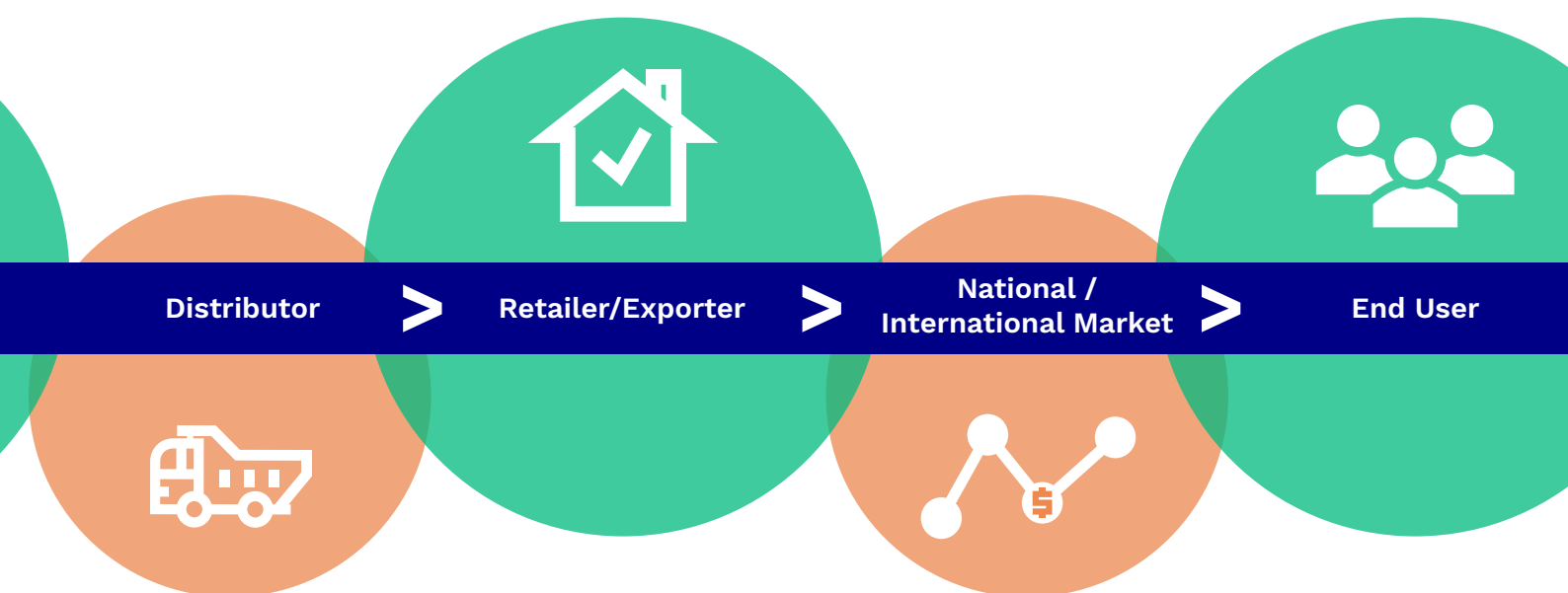
Certification



One-stop partner across the entire supply chain



Cotecna acts as a single, trusted point of contact for all quality, safety, and compliance needs — from origin to destination. Our integrated services streamline operations, reduce complexity, and ensure consistency across every stage of the supply chain. We support in Optimizing your spice purchasing by identifying high-quality sources and avoiding adulterated or low-potency products.



Global presence with local expertise

neotron
Part of the Cotecna Group

COTECNA
Netherlands

FITOSOIL
Part of the Cotecna Group

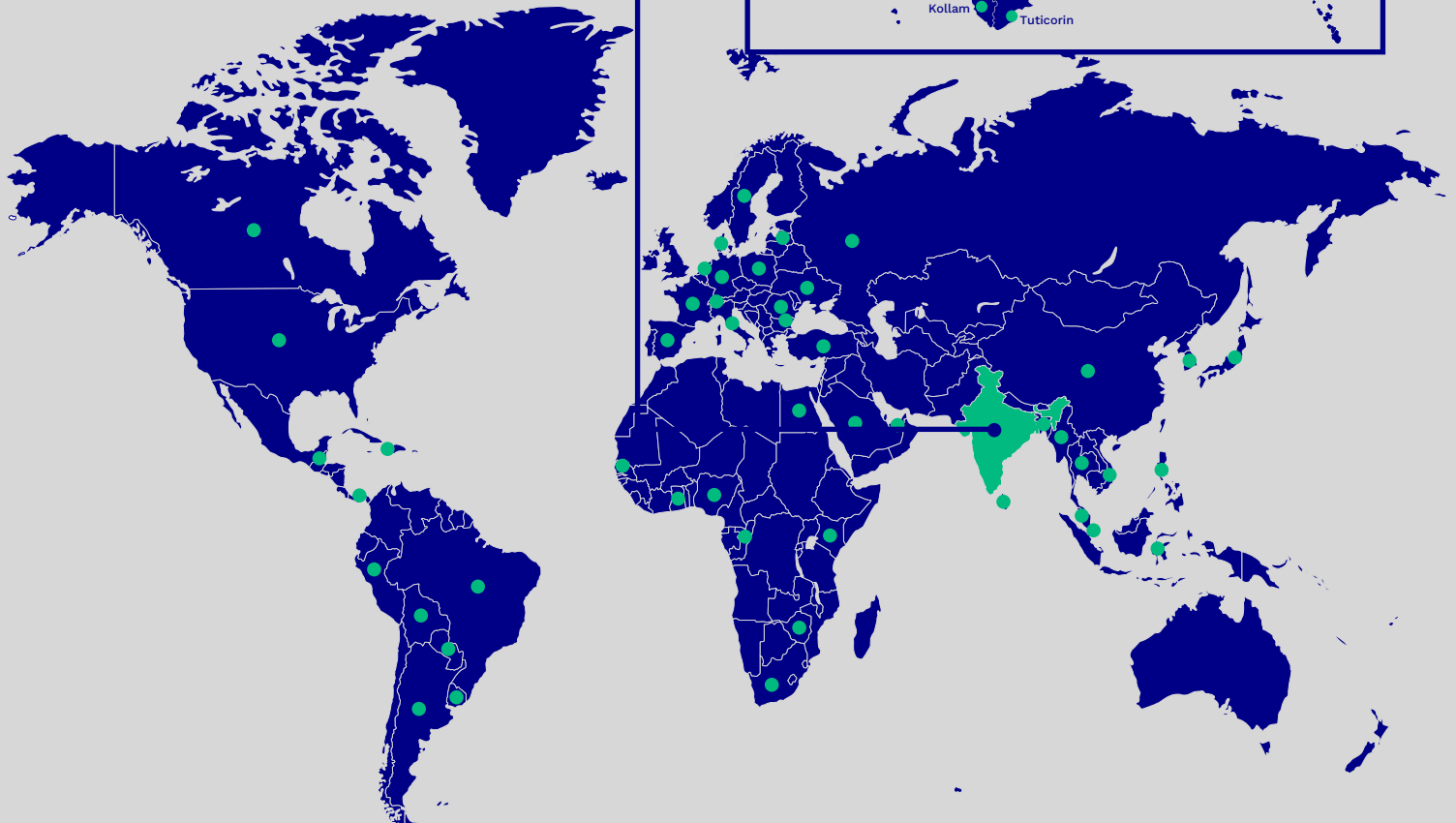
مختبرات ويمبي
WIMPEY LABORATORIES

GEOCHEM
INDIA
Part of the Cotecna Group

SHIVA
Part of the Cotecna Group

Geo-Chem Laboratories | Local Presence

- ▲ Laboratory Locations
- Other Branches
- ★ Cotecna Locations





With a strong international footprint and specialized laboratories in **India, Europe, and the Middle East**, we combine global standards with in-depth local knowledge. This enables us to support **Indian producers at origin**, as well as **European and Middle Eastern buyers at destination**, with the same level of excellence and responsiveness. We offer a complete suite of **Spice Testing services** designed to help food manufacturers, distributors, and retailers maintain consistent quality and ensure **regulatory compliance**.

GEO-CHEM India	A pan-India testing and inspection network with deep expertise in spices, recognized by the World Spices Organisation as one of India's top five spice-testing laboratories.
SHIVA ANALYTICALS India	Comprehensive analytical services specializing in food, environmental, and pharmaceutical testing, supporting global compliance and quality assurance.
NEOTRON Europe	Advanced laboratories focused on safety testing.
COTECNA LAB NETHERLANDS Europe	High-capacity laboratories with rapid turnaround times.
FITOSOIL Europe	Agricultural and environmental expertise supporting upstream quality.
WIMPEY LABORATORIES Middle East	Food and spice testing laboratories supporting chemical and microbiological analysis, import compliance, and regulatory requirements across the Middle East.

Continuous regulatory support

Food safety regulations and quality standards are constantly evolving. We meet stringent Food Safety standards with confidence. Cotecna provides ongoing regulatory monitoring and expert guidance, ensuring that analytical testing is always aligned with the latest requirements of different countries and markets — helping our partners stay compliant and competitive.

Here are our core pillars:

- > EU, UK, US, and Middle East regulatory alignment.
- > Label review and conformity assessment.
- > Regulatory updates and export documentation support.

Quality, transparency, and data reliability



We are committed to delivering accurate, robust, and fully traceable analytical results. Our processes are designed to guarantee the highest level of data integrity, supporting informed decision-making and reinforcing trust throughout the supply chain.

A partnership-driven approach

At Cotecna, clients are not just customers — they are partners. We work side by side with them, building long-term relationships based on collaboration, technical expertise, and a shared commitment to quality and safety.

Analytical Proposal

Residues and Contaminants

Our Chemical laboratories can support customers with **specific analytical packages relating to chemical controls of Residues and Contaminants**. Below we list the main proposed parameters:

- > **Pesticides:** according to Pesticide Residues EU Regulation 896/2005/USFDA/SFDA/Indonesia/Japan/GSO/Korea/Internal analytical packages
- > **NPOP and NOP Testing**
- > **Fumigants** (E.g. Ethylene oxide)
- > **Mycotoxin:** Aflatoxins, Ochratoxin A, Deoxynivalenol, Zearalenone
- > **Naturally occurring toxin:** Pyrrolizidine Alkaloids
- > **Heavy metals**
- > **Allergenic substances in accordance with REGULATION (EU) 1169/ 2011 and its amendments**
- > **Permitted Food Colours**
- > **Active Ingredients such as Piperine, Coumarin, Capsicin, Curcumin etc.**
- > **Illegal dyes**
- > **Organic contaminants:**
 - Polycyclic Aromatic Hydrocarbons (PAH)
 - Polychlorinated Biphenyls (PCB)
 - Mineral Oil Hydrocarbons (MOSH/MOAH/POSH)
 - Volatile Organic Solvent Residues
 - Dioxins
 - Nicotine
 - 3-MCPD
 - Acrylamide
 - Nicotine
- > **Radioactivity**



Microbiological Analysis

Our microbiological laboratories can support customers with specific analytical packages relating to microbiological controls. Below we list the main proposed parameters:



ISO methods according to CeIRSA Guidelines for spices & aromatic herbs

- > Count of microorganisms at °30C (ISO 4833:1)
- > Presumptive *Bacillus cereus* count (ISO 7932)
- > Beta-glucuronidase-positive *Escherichia coli* count (ISO 16649:2)
- > Count of coagulase-positive staphylococci (ISO 6888:1)
- > Count of Enterobacteriaceae (ISO 21528:2)
- > Mold counts at °25C (NF V059:2002-08)
- > Detection of *Salmonella* spp. (ISO 6579:1) in 25 g (UC1* or UC5**)
- > Count of *Listeria monocytogenes* (ISO 11290:2) (UC5**) or detection of *Listeria monocytogenes* (ISO 11290:1) in 25g (UC1*)
- > Aerobic Plate Count – (US FDA BAM Chapter 3/ISO 4833)
- > Presumptive *Bacillus cereus* Count – CMMEF Chapter 31
- > Beta-glucuronidase-positive *Escherichia coli* Count (ISO 16649)
- > Count of Coagulase-positive Staphylococci (ISO 6888)
- > Count of Enterobacteriaceae (ISO 21528)
- > Yeast & Mold Counts at °25C (US FDA BAM Chapter 18/Micro Fast Easy Count Plate/ISO 21527)
- > Detection of *Salmonella* spp. – ISO 6579/Micro Fast Easy Count Plate
- > Count or Detection of *Listeria monocytogenes* (ISO 11290)

Ph.Eur. Methods

- > Microbial count in TSA
- > Yeast count
- > Mold Count
- > Bile-Tolerant Gram-Negative Bacteria count
- > Detection of *Escherichia coli* (Ph. Eur.) in 1 g
- > Detection of *Salmonella* spp. (Ph. Eur.) in 25 g

***1 sample unit**

**** 5 sample units**

Molecular Biological Proposal

Our Molecular Biology laboratories can support customers with specific analytical packages relating to specific controls. Below we list the main proposed parameters:

- > **GMO Analysis**
- > **ALLERGENS**
- > **AUTHENTICITY:**
Identification of Plant Species
(*NGS technique*)

Sensory Testing

Physical Testing

- > **Filth test**
- > **Particle size**
- > **Colour index**
- > **Adulteration**
- > **Physico-chemical tests**

Packaging Testing

- > **Global and Specific migrations**
- > **NIAS**
- > **Phthalates**
- > **Primary Aromatic Amines**
- > **Bisphenol A**

Regulatory Support

- > **Label review**
- > **Regulatory updates alert**
- > **Proximate Analysis of Spices & Condiments**



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