

ORGANIC TESTING, ANALYSIS AND CERTIFICATION AT COTECNA

Testing Services, Analytical Expertise,
and Certification—offered by





RISING DEMAND FOR ORGANIC PRODUCTS **GLOBALLY**



OVERVIEW

The global demand for organic products has been steadily increasing over the past decade. Consumers are becoming more health-conscious and environmentally aware, driving growth in the organic food, personal care, textile, and beverage sectors.

KEY DRIVERS

1

Health Awareness: Consumers perceive organic products as healthier, free from synthetic pesticides, hormones, and genetically modified organisms (GMOs).

2

Environmental Concerns: Organic farming practices are considered more sustainable, promoting soil health, biodiversity, and reduced chemical usage.

3

Increasing Disposable Income: In many regions, rising middle-class income levels allow consumers to spend more on premium and health-oriented products.

4

Government Support & Regulation: Many countries now have certification standards and subsidies supporting organic farming (e.g., USDA Organic, EU Organic).

5

Retail Expansion: Major retailers and e-commerce platforms are expanding their organic product lines, improving accessibility.

6

Food Safety Concerns: Scandals related to food contamination have made consumers more cautious, turning to organic products for perceived safety.



MARKET TRENDS

- Asia-Pacific is emerging as a fast-growing market, especially in China, India, and Japan.
- North America and Europe remain the largest markets due to mature consumer awareness and regulatory frameworks.
- Expansion of organic cosmetics, textiles, and baby food is becoming increasingly prominent.

CHALLENGES

- > Higher production costs and retail prices
- > Limited shelf life of fresh organic produce
- > Certification complexity and trust issues in some regions
- > Supply chain inefficiencies, especially in developing nations
- > Risks of non-compliance, contamination, and fraud

1. Non-Compliance Risks

Failure to adhere to laws, regulations, or industry standards can lead to:

- Legal penalties: Fines, sanctions, or criminal charges.
- Loss of licenses/certifications: Regulatory bodies may revoke operational approvals.
- Reputation damage: Customers and stakeholders may lose trust.
- Operational disruptions: Shutdowns, recalls, or increased scrutiny.
- Increased costs: Legal fees, corrective actions, and higher insurance premiums.

2. Contamination Risks

Contamination (biological, chemical, or physical) can result in:

- Health and safety hazards: Risk of illness, injury, or death.
- Product recalls: Costly and damaging to brand reputation.
- Loss of consumer confidence: Especially critical in food, water, and pharmaceutical industries.
- Regulatory action: Investigations, audits, or penalties.
- Supply chain disruption: Delays, product shortages, or waste.

3. Fraud Risks

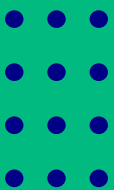
Fraud (intentional deception for personal or organizational gain) may lead to:

- Financial losses: Direct theft or embezzlement.
- Misleading data: Affecting business decisions and compliance reporting.
- Legal consequences: Civil or criminal actions.
- Internal trust erosion: Impacting morale and culture.
- Market manipulation or consumer deception: Loss of investor confidence or customer trust.
- The value of end-to-end verification—from soil inputs to final certification





MEET THE EXPERTS



INDEPENDENT LEADERS, UNITED IN ONE MISSION: **SAFEGUARDING ORGANIC PRODUCTION**



Food and environmental
testing, based in Italy and
globally trusted



Agronomic lab services focused on soil
health and residue analysis, based in
Spain and operate on a global scale



Italy's #1 organic
certification body with over
20 years of leadership

IN ORGANIC PRODUCTION

At Fitosoil, we offer a wide range of analyses aimed at guaranteeing the quality, safety and regulatory compliance of organic production. Our technical expertise and analytical capabilities allow us to adapt to the specific needs of organic operators, certifiers, distributors and producers.



COMPREHENSIVE SOIL CHARACTERIZATION:

- > Complete physical-chemical analysis: texture, pH, conductivity, CEC, salinity.
- > Determination of macro and micronutrients (N, P, K, Ca, Mg, S, Fe, Zn, B, Mn, Cu).
- > Organic matter as a key indicator of fertility.
- > Evaluation of heavy metals (Cd, Pb, Hg, As, Ni, Cr).



IRRIGATION WATER AND FERTIGATION CONTROL:

- > Basic physical-chemical parameters (pH, conductivity, salinity, sodium, chlorides, carbonates).
- > Nutrient content and potentially toxic elements.
- > Assessment of water suitability for agricultural use.



ANALYSIS OF FERTILIZERS AND AMENDMENTS:

- > Nutritional composition (NPK, micronutrients).
- > Organic matter, C/N ratio.
- > Determination of heavy metals and contaminants.
- > Verification of products permitted in organic production.



DETECTION OF CONTAMINANTS IN AGRICULTURAL PRODUCTS:

- > Determination of nitrates in leafy vegetables.
- > Quantification of heavy metals in vegetables and processed products.

ACCREDITED FOR PESTICIDE ANALYSIS IN SOILS

PRODUCTS/MATERIALS TESTED

- > Fruits
- > Vegetables
- > Cereals
- > Legumes
- > Oilseeds
- > Dried fruit and nuts
- > Raw material of vegetable origin for baby food
- > Juices
- > Wines
- > Oils
- > Plant material (leaves, plants, seeds, seedlings, stems)
- > Concentrates of juices, fruits, and vegetables with high water and acid content
- > Soil

STANDARD SPECIFICATIONS / TEST METHOD

In-house method according to

SANTE Analytical Quality Control and Method Validation Procedures for Pesticide Residues Analysis in Food and Feed

TYPE OF TEST

Pesticide residues by liquid chromatography mass spectrometry (LC-MS/MS)

Why choose Fitosoil?

- > Specialization in organic farming since its inception.
- > Technical laboratory, agile and with a practical approach.
- > Validated methodologies adapted to complex matrices.
- > Extensive experience in European regulatory compliance (EU 2019/1009).
- > Commitment to continuous improvement and customer trust.
- > Laboratory accredited in accordance with ISO 17025.



For more information and quotes, please contact us at **comercial@fitosoil.com**

IN ORGANIC PRODUCTION

Neotron has a long-standing and consolidated experience in the **analytical testing** of organic products, supporting clients in both safety assessment **and regulatory compliance** across international markets.

Our laboratories provide comprehensive analytical services focused on the **detection of critical contaminants**, including **residual solvents, polycyclic aromatic hydrocarbons (PAHs), MOSH/MOAH, mycotoxins, GMOs, and microbiological parameters**. These analyses are performed using state-of-the-art methodologies to ensure the highest level of reliability and regulatory robustness.

A distinctive strength of Neotron lies in its over **50 years of expertise in pesticide residue analysis**. We offer customized analytical packages as well as testing programs fully aligned with organic regulations, supporting producers, processors, and brand owners throughout the supply chain.

In Europe, our services are designed to **meet the requirements of organic legislation**, including:

- > Regulation (EU) No. 848/2018
- > Regulation (EU) No. 1165/2021
- > For the Italian market: Ministerial Decree No. 309 of 13 January 2011

For the **North American market**, Neotron supports selected clients with organic **conformity** assessments, providing analytical evidence **in line with the USDA National Organic Program** (NOP – United States Department of Agriculture) requirements.

Thanks to our deep regulatory knowledge, advanced analytical capabilities, and decades of experience, **Neotron is a trusted partner** for ensuring the safety, integrity, and compliance of organic products worldwide.

For more information and quotes, please contact us at **customercare@neotron.it**





Suolo e Salute
Part of the Cofecna Group

IN ORGANIC PRODUCTION

Suolo e Salute has been a pioneer in promoting organic method and now is the leading Control and Certification Body for organic products in Italy certifying over 23,500 operators over a 25% of the organic agricultural land. Suolo e Salute certifies more than 5,000 operators for other certification services as the Italian integrated pest management certification, PDOs-PGIs-TSGs, animal welfare and more.

It has 19 operative offices, around 180 employees and freelance collaborators and over 300 auditors. Every year Suolo e Salute carries out 30,000 audits and handles 3,000 samples of food to be tested by accredited Laboratories, not only in Italy but also in other strategic agrofood countries..

Suolo e Salute's core business is the organic sector, but it is accredited by Accredia not only for the EU Organic (Reg. (UE) 2018/848) but also for the certification of the Traceability in the Food and Feed Supply Chain (ISO 22005), GlobalG.A.P. standards, SQNBA (Italian standard for animal welfare), Integrated Pest Management according to UNI 11233 and PDO, PGI, TSG (quality schemes related to geographical indication) according to EU Regulation Nr. 1151/2012.

Regarding international accreditation, Suolo e Salute is accredited by USDA to certify organic production according to NOP (National Organic Program) and for Japan for JAS (Japanese Agricultural Standards). Suolo e Salute can also issue Transaction Certificates to provide organic recognition of EU Organic certified products exported to other countries without an organic regulation implemented.

Other certification services include ISO 14067 (Product Carbon footprint) and ISO 14064 (Organisations carbon footprint), Italian Integrated pest management certification (SQNPI), Bio Suisse, Demeter, private standards for animal welfare, vegan agriculture/food and organic cosmetics.



For more information and quotes, please contact us at **info@suoloesalute.it**



IMPORTANCE OF ANALYZING PESTICIDES IN SOILS





Pesticide analysis in soils is a fundamental practice to ensure **ecosystem health**, **food safety**, and **regulatory compliance**. Below are the key reasons why this analysis is crucial:

1. Protection of Human Health

- > **Pesticide residues** can be transferred from soils to crops and, therefore, to consumers.
- > Some compounds have chronic or acute toxic effects (carcinogenic, neurotoxic, endocrine disruptor).

2. Environmental Conservation

- > Pesticides can contaminate **aquifers**, rivers, and lakes through runoff or leaching.
- > Pesticides affect soil **biodiversity**, including microorganisms essential for soil fertility and structure.

3. Persistent Pollution Assessment

- > Some pesticides are **persistent compounds** that remain in the soil for years.
- > The analysis allows dangerous accumulations to be detected and remediation measures to be taken.

4. Regulatory Compliance and Certifications

- > Many certification programs (such as **EU/JAS Organic**, **GlobalG.A.P.**, etc.) require proof that the floors are free of unauthorized residues.
- > It facilitates compliance with national and international regulations on the use and residues of agrochemicals.

5. Informed Agronomic Decision Making

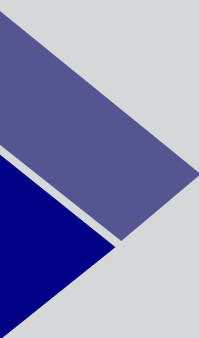
- > It allows you to select the right type of crop for contaminated soils or to decide on management measures such as **bioremediation** or **phytoremediation**.
- > It reports on the historical use of agrochemicals on leased or newly acquired land.

6. Preventing the Risk of Commercial Rejection

- > In international markets, agricultural products can be rejected if unpermitted residues are detected, even if they come from the soil and not from recent applications.



OUR INTEGRATED SERVICES FOR ORGANIC PRODUCTION





Soil & input control

- > Analysis of pesticide residues, heavy metals and soil fertility
- > Verification of inputs compatible with ecological regulations
- > Diagnosis for transition to organic agriculture

Field & crop monitoring

- > Periodic technical field visits
- > Register of sustainable agricultural practices
- > Training in integrated pest management and biological control

Control and Organic Certification

- > Taking charge of the organic application
- > Audit planning at the earliest possible time
- > On-field audit, documentation and lab analysis review and issuance of the organic certification

Harvest sampling

- > Crop and product sampling protocols
- > Traceability from plot to laboratory

Residue & contaminant analysis

- > Detection of pesticide, mycotoxin and heavy metal residues
- > Nutritional analysis of the product (vitamins, minerals, etc.)
- > Nutritional testing
- > Organic certification BNN collaborating laboratory
- > Export readiness
- > Verification of phytosanitary and quality requirements of the destination country, MRLs in Europe and other countries with the EDATALAB platform

ADVANCED LABORATORY TESTING

By Neutron | Fitosoil

SAFETY TESTING:

- > Pesticide and multi-residue analysis (Include scope detail and LPE with over 100 different matrices)
- > Fumigants
- > Mycotoxins
- > Heavy metals, nitrates, dioxins, PAH, MOSH/MOAH/POSH and PFAS
- > Colorants
- > GMO screening and allergen testing
- > Microbiological safety and mycotoxins
- > Packaging testing
 - Global and Specific migrations
 - NIAS

SOIL TESTING:

- > Soil composition and fertility profiling
- > Accredited in multi-residues in soils

Accredited labs with advanced GC-MS/MS, LC-MS/MS, ICP-MS platforms



WHY CHOOSE US: INTEGRATED, ACCREDITED, INDEPENDENT



Full-service coverage from soil to shipment



ISO 17025 & ISO 17065 accredited



Expertise deeply rooted in Italy's agricultural ecosystem



Services aligned with EU and global organic regulations



Transparent, client-centered, and efficient

COTECNA: GLOBAL BACKBONE OF QUALITY & COMPLIANCE

Neutron, Fitosoil, Suolo e Salute are proud members of the **Cotecna Group, A GLOBAL LEADER IN TESTING, INSPECTION, AND CERTIFICATION (TIC).**

With **180+ offices and labs worldwide**, Cotecna provides trusted support for international trade, regulatory compliance, and food chain integrity.

Our local expertise is backed by global reliability.

GET IN TOUCH

neutron
Part of the Cotecna Group

+39 059 461711

customer@neutron.it

FITOSOIL
Part of the Cotecna Group

+34 968 88 32 71

comercial@fitosoil.com



Suolo e Salute
Part of the Cotecna Group

+39 051 6751265

info@suoloesalute.it



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