Bringing More to the Table

We help you to meet the essential requirements for food and feed analysis by providing individual solutions and easy-to-use instrumentation - from farm to production to the final consumer product.

**Edible Oils**
- Reliable quality control of process intermediates and final products
- Assessment of risk potential for feedstocks
- Analysis of authenticity, origin and detection of genetically modified organisms (GMO)

**Dairy & Beverages**
- Monitoring of toxic metals, pathogens, and spoilage germs
- Analysis of minerals, fats, proteins, color, and turbidity
- Origin and species analysis of wine and dairy products

**Meat & Seafood**
- Species analysis of meat products
- Food safety analysis, including element speciation analysis of fish and seafood
- Hygiene control by means of pathogen detection

**Produce & Grain**
- Multi-parameter instrumentation for a wide range of applications
- Diverse and versatile sample preparation techniques
- Detection of even trace levels of harmful components
**Edible Oils**

Keeping quality standards for global stakeholders with a complex supply chain – we help you to keep it simple and focusing on the relevant quality and food safety parameters.

**The challenge**
Accurate and reproducible analysis in a challenging sample matrix covering a wide range of parameters throughout the production and manufacturing processes.

**The solution**
Customized multi-parameter analytical instruments and methods to support the analysis of quality, food safety, and genetic parameters.

Ensuring Quality, Safety, and Authenticity of Products Containing Edible Oils

Analytik Jena is a partner you can depend on – with our many years of experience in determining contamination originating from the chemical process, raw and by products and additives, evolution of nutrients along the value chain, cross-contamination, and other established quality parameters.

**Be more efficient**
- Dilute and shoot – analysis of edible oils and fats without need for digestion
- Automation options
- Unattended operation
- Risk assessment via feedstock analysis prior to processing and blending

**Get reliable results**
- Interference-free analysis of trace and major elements
- Raw material and product traceability
- Reliable instrument performance ensured by Self Check Systems
- Pre-developed methods and direct application support

---

**Dairy & Beverages**

We help producers of dairy products, beverages, and drinking water to keep their quality, safety and authenticity promises with analytical solutions that can be tailored to the requirements of your lab.

**The challenge**
Reliable, on-time analysis of diverse sample types covering a wide range of parameters of relevance for food quality and safety as well as highly specific identification of origin and species.

**The solution**
Comprehensive portfolio of analytical products dedicated to the precise analysis of safety and product quality control parameters. Sensitive and specific analytical tools for assessing relevant food authenticity claims.

Highly Specific and Reliable Results - On Time

Quick and easy access to critical parameters allows you to efficiently assess feedstock characteristics, manage processes, and approve final products such as raw milk, powdered milk, cheese, butter or yoghurt, non-alcoholic and alcoholic beverages, and drinking water.

**Authenticate your claims more easily**
- Species identification with maximum specificity based on unique DNA sequences
- Fast and accurate isotope ratio analysis

**Get better results**
- Simple and robust analysis
- Cost-effective and easy-to-use technologies
- High-throughput analysis for contract labs
- Flexible instrument configurations
- Minimal sample preparation
- Accelerated microbial detection, including pathogens as well as fermentation microorganisms, using streamlined PCR-based methods

---

**Analyze with us**
- Metals, semi-metals, and non-metals (e.g. Cd, Pb, As, Hg)
  AAS, ICP-MS, ICP-OES, C/N/S/X
- Origin analysis
  Isotope ratio ICP-MS
- GMO analysis
  Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
- Risk potential analysis of 3-MCPD via chlorine detection
  C/N/S/X
- Color, FFA-content, DOBI, K-value, I-value
  UV/Vis
- Toxic metals, micro and macro elements (e.g., Ca, K, Na, P)
  AAS, ICP-OES, ICP-MS, C/N/S/X
- Element speciation analysis (e.g., As, Hg)
  ICP-OES, ICP-MS
- Species identification and microbial detection including pathogens (e.g., Listeria spp.)
  Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
- Origin analysis
  Isotope ratio ICP-MS
- Color, proteins, phosphates, fats & active compounds
  UV/Vis
- Total organic carbon and total bound nitrogen
  TOC, TN
- GMO analysis of food additives
  Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
Meat & Seafood

Regardless of laboratory conditions, we help manufacturers and processors of meat and fish products to ensure the fast and reliable analysis of relevant quality and food safety parameters.

Maximize Your Profits with Timely Results

To avoid product wastage and lost profits, quick access to precise and accurate results is crucial for products with short shelf life such as raw meat, processed meat, poultry, fish, and other seafood. Monitoring the quality of animal feed keeps livestock healthy and ensures raw products of high quality.

The challenge
Monitoring trace levels of harmful compounds in a vast variety of solid samples using highly sensitive and selective analytical tools including sample preparation techniques.

The solution
Dedicated sample preparation techniques alongside a wide analytical portfolio to detect microbial, pathogenic, and inorganic food safety parameters very quickly.

Effortless analysis processes
- User-friendly operation of protocols and devices
- Efficient workflows
- Easy-to-automate methods
- Quick instrument readiness

Gain more precise and fast results
- Established techniques for elemental analysis
- Highly sensitive instrumentation for accurate trace element and elemental speciation analysis
- Accelerate product release process using PCR-based microbial detection within a few hours
- Analysis of multiple parameters simultaneously using combined and multiplex PCR on real-time PCR cycler

Analyze with us
- Analytical sample preparation
  - Digestion, extraction, lysis
- Toxic metals, micro and macro elements (e.g., As, Cd, Pb)
  - AAS, ICP-OES, ICP-MS
- Element speciation analysis (e.g., As, Hg)
  - LC-ICP-MS
- Species identification and detection of animal components (e.g., meat, fat, and bone meal) in food and animal feed
  - Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
- Hygiene monitoring by detecting microbes (e.g., E.coli) and pathogens (e.g., Salmonella spp., Campylobacter spp.)
  - Automated nucleic acid extraction, thermal cycler, real-time thermal cycler

Produce & Grain

Profit from our easily adaptable and extendable methods. Gain quick and reliable results for a broad variety of samples to ensure the quality and food safety the consumer is looking for.

Ease of Operation with Scalable Throughput

Analytik Jena offers highly sensitive and multi-parameter analysis of seed, grain, rice, flour, bread and other processed grain products, vegetables, fruits, herbs, spices, legumes, and cannabis. With our wide application range we ensure you with reliable results for food safety and quality determination.

The challenge
Accurate and fast analysis of quality, safety, and nutritional parameters across a vast variety of different food types, from seed to final product.

The solution
A combination of analytical sample preparation technologies, multi-parameter analytical instruments and flexible automation options with scalable throughput capabilities.

Best analytical performance
- Low limits of detection to ensure food safety
- High-throughput capabilities
- Flexible automation possibilities
- Adaptable instrument configurations for maximizing instrument utilization

Convenient access to many parameters
- Direct application support
- Customized method development
- Customized maintenance contracts
- Vast application database

Analyze with us
- Toxic metals, micro and macro elements (e.g., Ca, K, Na, P)
  - AAS, ICP-OES, ICP-MS
- Element speciation analysis (e.g., As, Hg)
  - LC-ICP-MS
- GMO testing and allergen detection
  - Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
- Detection of microbes and pathogens
  - Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
- Food pigments, chlorophyll, carotenoids, proteins, sugars, fats, and vitamins
  - UV/Vis
- Analytical sample preparation
  - Digestion, extraction, lysis
General Food Analysis

We help you to efficiently analyze a large variety of food and agricultural samples spanning many key analytical parameters. Flexible instrument configurations allow scalable throughput and automation possibilities.

Analytical Instrumentation That Suits Your Lab

Cost-efficiency, scalability, accuracy – Analytik Jena provides unique analytical solutions, they can be tailored to your laboratory specific needs. We help you to meet todays’ requirements and to be prepared for future challenges.

Gain an economic advantage
- Low operational and analysis cost
- Easy-to-use analytical instruments
- Low maintenance requirements
- Minimal sample preparation
- Quick instrument readiness – ideal for shiftwork operation
- Scalable sample throughput, from low to ultra-high throughput
- Compact design: saves valuable lab space

Rely on our analytical expertise
- Experts at your disposal
- Pre-installed methods and workflows
- Regulation compliance
- High robustness, precision, specificity, and sensitivity
- Flexible automation options

Analyze with us
- Metals, semi-metals, selected non-metals
- Element species
- Nanoparticles
- Color, food pigments, nutritional parameters
- Species identification of meat, dairy products etc.
- GMO analysis
- Microbial detection including pathogens
- Origin analysis
- TOC detection for cleaning validation of production and storage equipment
- Allergen detection

Customer support
- Direct contact with Analytik Jena application specialists
- Customized service contracts
- Large application database

Environmental Responsibility

With the aid of flexible and easy-to-use instrument combinations, we ensure accurate, precise and fast results for your environmental monitoring according to established methods.

Focusing on the Essential

Whether for wastewaters, process water, effluents, solid waste, or soils, we help you to streamline your environmental analysis processes to be as simple and flexible as possible with minimal effort.

Compliance and responsibility
- Take responsibility for your by-products and waste
- Comply with environmental regulations
- Ensure efficient and careful use of resources
- High robustness, precision, specificity, and sensitivity
- Customized method development
- Flexible automation options

Analyze with us
- TOC, TN\textsubscript{4}
- AOX, EOX
- Eco-toxic heavy metals
- AAS, ICP-OES, ICP-MS
- COD, turbidity, NO\textsubscript{3}–, NO\textsubscript{2}–
- UV/Vis
- Microbial contaminations

Automated nucleic acid extraction, thermal cycler, real-time thermal cycler
### Our Solutions at a Glance

Benefit from the advantages of our various methods and devices for food analysis. We offer compliance with relevant DIN, EN, ISO, EFSA, ASTM, FDA - standards, and other international and regional regulations.

<table>
<thead>
<tr>
<th>Method</th>
<th>Device/ Kit</th>
<th>Special Features</th>
<th>Suitable for</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nucleic acid</td>
<td>InnuPure C16 touch, CyBio FeliX</td>
<td>Automated nucleic acid extraction possible</td>
<td>Food safety</td>
</tr>
<tr>
<td>extraction</td>
<td>Biometra TAdvanced, Biometra TRIO, qTOWER³, CyBio FeliX</td>
<td>High-performance thermal cycler for PCR or real-time PCR</td>
<td>Food safety</td>
</tr>
<tr>
<td>Nucleic acid</td>
<td>Specord Plus</td>
<td>Wide range of accessories and additional cuvette position for high turbidity samples</td>
<td>Quality control</td>
</tr>
<tr>
<td>detection</td>
<td>ScanDrop²</td>
<td>Multi-parameter instrumentation for a wide range of applications</td>
<td>Environmental monitoring</td>
</tr>
<tr>
<td>UV/Vis</td>
<td>SPECORD PLUS</td>
<td>High accuracy, including for low concentrated samples</td>
<td>Quality control</td>
</tr>
<tr>
<td>ScanDrop²</td>
<td>Low lab footprint, fast detection, high-throughput in microvolume and standard cuvette</td>
<td>Easy installation of accessories and intuitive touch operation</td>
<td>Environmental monitoring</td>
</tr>
<tr>
<td>TOC/TN</td>
<td>multi N/C series</td>
<td>Wide range TOC/TN analyzer</td>
<td>Quality control (drinking water)</td>
</tr>
<tr>
<td>TOC/TN</td>
<td>multi X 2500</td>
<td>Advanced particle handling and suitable for difficult matrices</td>
<td>Environmental monitoring</td>
</tr>
<tr>
<td>AOX</td>
<td>multi X 2500</td>
<td>Full method and configuration flexibility for AOX, EOX, PDX, TX</td>
<td>Environmental monitoring</td>
</tr>
<tr>
<td>C/N/S/X</td>
<td>multi EA 5100</td>
<td>Matrix tolerance and robustness (dual furnace)</td>
<td>Food safety</td>
</tr>
<tr>
<td>C/N/S/X</td>
<td>multi EA 3100</td>
<td>Interference-free TCI and TS, TN analysis</td>
<td>Environmental monitoring</td>
</tr>
</tbody>
</table>

---

Do you want to know how to benefit from these solutions? Get in touch with us directly.

Visit [www.analytik-jena.com/food-agriculture](http://www.analytik-jena.com/food-agriculture) or e-mail [solutions@analytik-jena.com](mailto:solutions@analytik-jena.com)