

# Food Authenticity Testing



**Prevent food fraud**

**Increase food industry competence**

**Protect ethic and consumer safety issues**




**Next-Generation Sequencing (NGS)**

**Conventional DNA sequencing**

**Real-Time PCR**

**PCR**



A vertical strip on the left side of the slide shows laboratory glassware, including pipettes and a petri dish with a grid, containing various colored liquids and cultures.

According to a UN report, 16-75% of fish reaching consumers is incorrectly marked.

A 2014 NGS analysis performed on 60 different kebabs served in London as lamb, indicated that 17 were found with different types of meat, 7 did not even contain lamb, 5 had meat that could not be identified.

Molecular solution innovations introduce

economically affordable, reliable, **fast** and sensitive molecular tools that will lead to the most **effective** and **accurate** control of fraud and authenticity.

This will lead to  
food fraud reduction  
consumers, producers & food distributors protection  
**added value** in products

**Molecular techniques** have the advantage of **high sensitivity & specificity** and are **preferred for processed foods**.

---

### **Animal Species Detection- Real Time PCR**

The usefulness of this tool is food fraud detection (e.g. cow's milk in feta or pork in beef) & Authenticity (e.g. HALAL-VEGAN certification)

### **Organisms Detection-NGS analysis**

Qualitative and Quantitative organism profiling. Large food companies use the method to control suppliers, production and final products.

### **DNA Barcoding**

Organism's genetic identity compared with databases, result in an indisputable "DNA certificate" of the species of the organism. Results protect producers/distributors from fraud and the product acquires higher added value

### **Multispectral Imaging**

By relating the findings of laboratory analyzes to state-of-the-art imaging techniques, we make real-time analysis possible. Applied for the identification of products such as meat and control of fraud in meat, oil, etc.