



INNOVA HEALTH FOOD LABS
Trophometry Experts

iNNova&Health Foodlabs is a laboratory for nutritional research and development of innovative functional foods, resulting in increasing competitiveness in the agri-food sector and the food industry. We are aiming for the accurate qualitative and quantitative identification of the ingredients of any liquid or solid food, of plant or animal origin, even food supplements, and thus in the creation of their unique “molecular identity”.

What we do



Basic Research

which will contribute substantially to the production of **new knowledge based on modern principles** of quality assurance of existing and new food products, to investigate their potential role in the health and quality of life of modern humans.



Applied Research

an area in which new knowledge will be applied to **improve the quality and safety of** existing and new food products on a semi-industrial- scale leading to market.



Technological Research & Development

which will include **systemic work** that is either based on existing knowledge and aims to prepare for the production of **new products, services, or to improve existing ones.**



EXPERTISE

Extraction of bioactive compounds from fruits, vegetables, herbs to extract-isolate bioactive compounds such as vitamins, phenolics, etc using green technologies. Mainly from citrus fruit peels.

Analysis of the bioactive substances from plants, fruits and herbs using high-end analytical technologies.

Preparation of fortified foods and drinks (bars, juices, sachets) using natural-based food-grade bioactive ingredients, high-end technologies (such as encapsulation), and providing tasty and healthy food and food recipes to industrial partners.



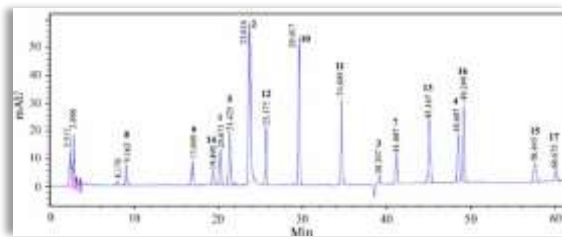
INFRASTRUCTURE

- **Small-scale Citrus Fruit Juice Production Line**
- **Basic food lab infrastructure**
Mixers, homogenisers, ovens, and spray-dryers for the food preparation



INFRASTRUCTURE

- **Ethos X Microwave Green Extraction of Natural Products**
- **Food Analysis: HPLC-RID-DAD, Microplate reader**



- **Spray Dryer for the encapsulation**



Microwave extraction is a process for **extracting insoluble or slightly water-soluble organic compounds from various samples.**

The process uses **microwave energy** to generate elevated temperatures and pressure conditions (100-115°C and 50-175 psi) in a closed vessel containing a sample and organic solvent(s) to achieve analyte recovery equivalent to that of the Soxhlet process, **using less solvent and significantly reduced processing time** compared to the Soxhlet process.

Monitor

- Microwave irradiation powers
- Temperature
- The extraction process stops before the samples get burned, and time is recorded for each treatment.
- A cooling system outside the microwave oven continuously condenses the extract.
- Quantity and quality.



Unique and Scalable Microwave Platform