

# Advanced Spectroscopic Sensors and Digital Platforms for Future Food Safety and Quality Monitoring



- **Monitoring**
- **AI & Digital solutions**
- **Bioscience**
- **Tech enablers for scaling-up**

Cristina Fernandez-Avila  
(Innovation Project Manager)



[cfernandez@iris-eng.com](mailto:cfernandez@iris-eng.com)



Early-detection  
monitoring

Data  
Scientists



Innovation  
& Project  
Managers



Industrial &  
Automation  
Engineers



Chemical  
Engineers,  
Biologists, Food  
Scientists



Physicists



Spectroscopists



Optical  
Engineers



### Entry Parameters

Spectrum title: Test Marcelo

Sample quantity: 100 | Number of repetitions: 1

Date of Arrival: 31/10/2024 | Producer/Deliver:

Country: | Batch Number:

Form Sample: | Food Type:

Comments:

Image:  (Maximum upload file size: 256 kb)

(1) Click here to add sample data

Capture

Capture Background

(2) Click here to capture the background spectra

Comparison

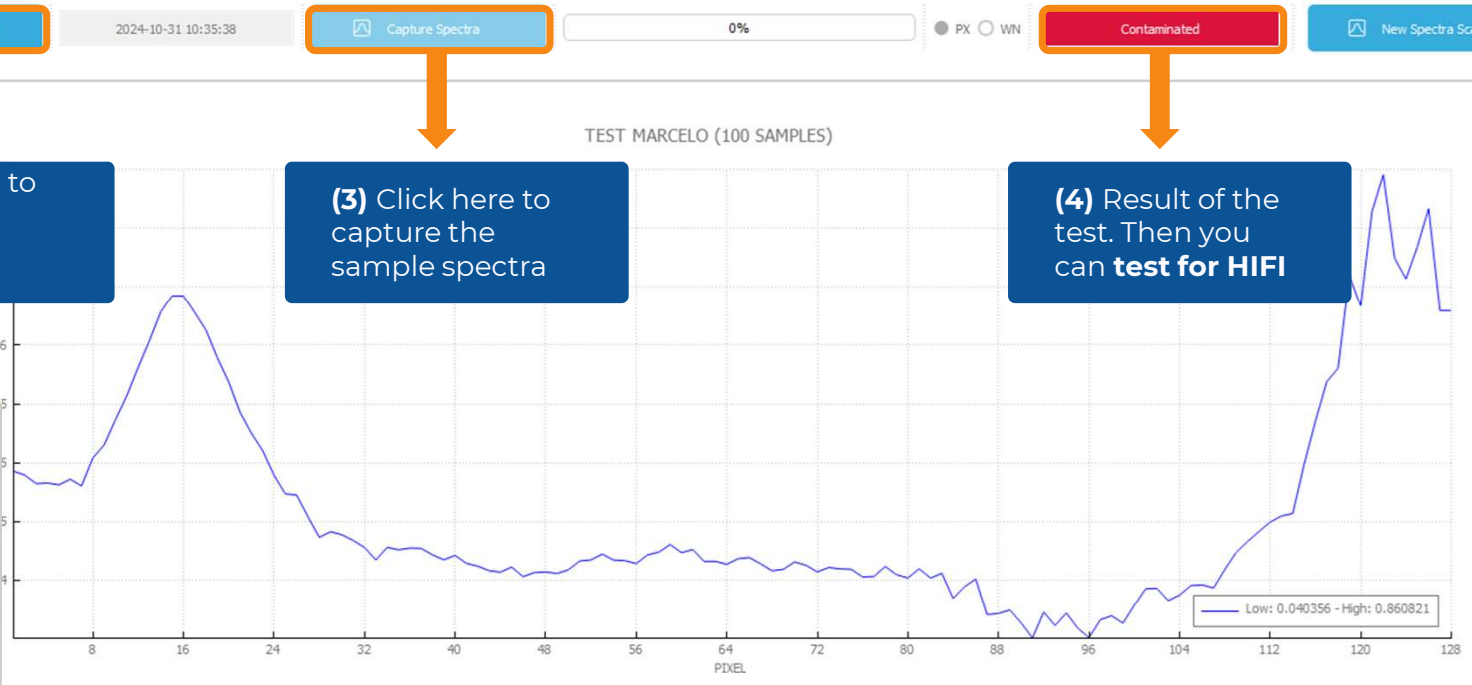
Capture Spectra

(3) Click here to capture the sample spectra

Datalog

Contaminated

(4) Result of the test. Then you can test for HIFI



Mobile app

- Consult

Desktop

- Developer
- Execution
- Consult



(3) Filter posts by using **hashtags**; in the **Trending** section, explore popular ones, click to see related posts, or **follow** to receive updates.

Start a new post



Filter by hashtag

Trending #EMERGINGRISKS #TECHNOLOGY #EFSA #FOODSAFETY #FOOD #FOODSAFER #INFO\_NEEDED more

Recent posts

Publications Saved Drafts

Latest post



(1) In **Recent Posts**, you can view all posts. The **Saved** tab shows posts you marked as relevant, and **Drafts** contains your unpublished posts.



(2) Use the **search** bar to find posts by keyword. Click **Latest post** to sort by the newest content (alternatively you can click **Latest comment** to read the most recent comments).



(4) The **News** section is a continuous stream of updates on food safety from trusted sources. Click **Save** to bookmark articles or **Share** to disseminate them via social media.



News Saved

16/10/2024 06:07:18  
**Food safety problem closes Detroit airline kitchen leaving 200 flights without meals**  
Share Save

16/10/2024 06:06:00  
**USDA launches internal investigation into handling of Boar's Head inspections**  
Share Save

16/10/2024 06:05:00  
**Dutch Salmonella egg outbreak over after sickened**  
Share Save

15/10/2024 06:05:00  
**Flowers and pesticides residues**  
The French Compensation Fund for Pesticide Victims (FIVP) recognised a causal link between a mother being exposed to pesticides during her pregnancy working as a florist and her daughter who died from leukaemia [lemonde.fr/planete/article/2024/10/09/les-  
Share Save

Twitter  
LinkedIn  
Facebook

Chat

Head of Communication and Marketing at IRIS Technology Solutions S.L.

Employee at IRIS Technology Solutions S.L.

System Company foodsafer

see more

Published 0

Commented 0

Received comments 0

Followed hashtags

#digital #feedsafety

#circulareconomy #tech #food

#technology #foodsafer

EDIT PROFILE

SKIP

DON'T SHOW THIS AGAIN

## Proteins Sources

**Nutrition Quality**

**Sustainability & Climate**

**Food Safety**

**Technofunctional & Sensory**

Search

Macronutrients

Micronutrients Vitamins

Micronutrients Minerals

Other Nutrients

Aminoacid Profile

Digestibility

Antinutritional Factors

Protein source

Food Source Classification

Agricultural Food Production

BEEF STEAK MINCE SO...				
CAMPBELL Soup Comp...				
Chili w/ beans lentils soy...				
Green lentils canned w/...				
Green lentils dried boile...				
Halloumi stew w/ lentils				
Lasagna w/ tomato lentils				
<b>Lentil</b>				
Lentil				
Lentil, blond, boiled/coo...				

1 - 10 of 125    << < > >>

Items per page: 10

### Lentil

---

#### Nutrition quality

#### Nutrient composition

##### Macronutrient

Alpha-linolenic acid (18:3, w3)	102.0mg/100g
Starch	28500.0mg/100g
Fat	940.0mg/100g
Protein	30000.0mg/100g
Carbohydrate	61990.0mg/100g

##### Micronutrient Mineral

Calcium	49.50mg/100g
Phosphorus	384.75ma/100a

# HORIZON-CL4-2025-04-DIGITAL-EMERGING-01: Advanced sensor technologies and multimodal sensor integration for multiple application domains (IA) (Photonics Partnership)

- 5 M & TRL 3 to 7 (*integration into multimodal systems enhances data accuracy, speed and reliability*)
- **2 different technologies:** •3D sensing and imaging such as LIDAR, optical coherence tomography (OCT), optical tomography, interferometry etc. •Communication fiber sensing •Chemical and gas sensing •Bio- and medical sensing and/or imaging •Particle sensing •Integrated photonic solutions
- **3 use cases:** •Healthcare (*medical diagnostics, disinfection, treatment through improved imaging techniques and diagnostic accuracy*). •Industrial efficiency and sustainability (*industrial processes such as manufacturing, quality control, and automation through improved sensing technologies*). •Agricultural/Food Sector (*precision agriculture, food safety, food waste reduction and supply chain management through improved sensing techniques for monitoring crop health, detecting contaminants, and optimizing production processes and raw material utilisation*).



Looking  
for  
partners

Cristina Fernandez-Avila (Innovation Project Manager)



cfernandez@iris-eng.com

# Thank you for your attention



The Giant LEaps project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101059632



The PHOTONFOOD project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101016444.



The FoodSafeR project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101060698.



**Join us at**

<https://my.foodsafer.com/>

Cristina Fernandez-Avila (Innovation Project Manager)



cfernandez@iris-eng.com