



European Union reference laboratory for Food Improvement Agents EURL-FIA

Spotlight: Food additives – status quo on chemical analysis and European regulations
Berlin, 26th of November 2024



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Belgian Public Health Institute

Connects health, science and society



120 years of scientific expertise

Scientific Public Research Institute



Surveillance

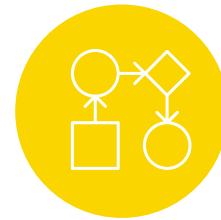
Risk
assessment

Quality control

Research



The cornerstones are
Surveillance
Scientific research to

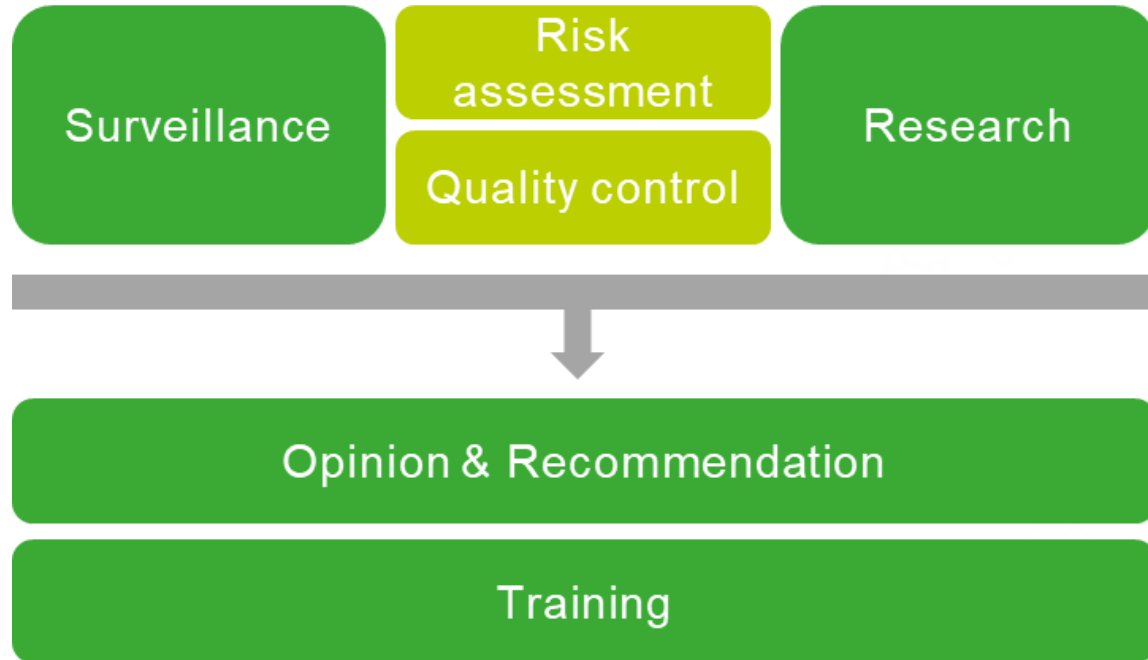


Assess the risks towards
public health,
animal health and
healthcare

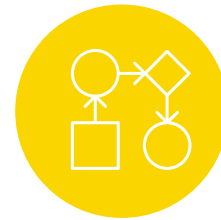


Verify the quality of
products and services

Scientific Public Research Institute



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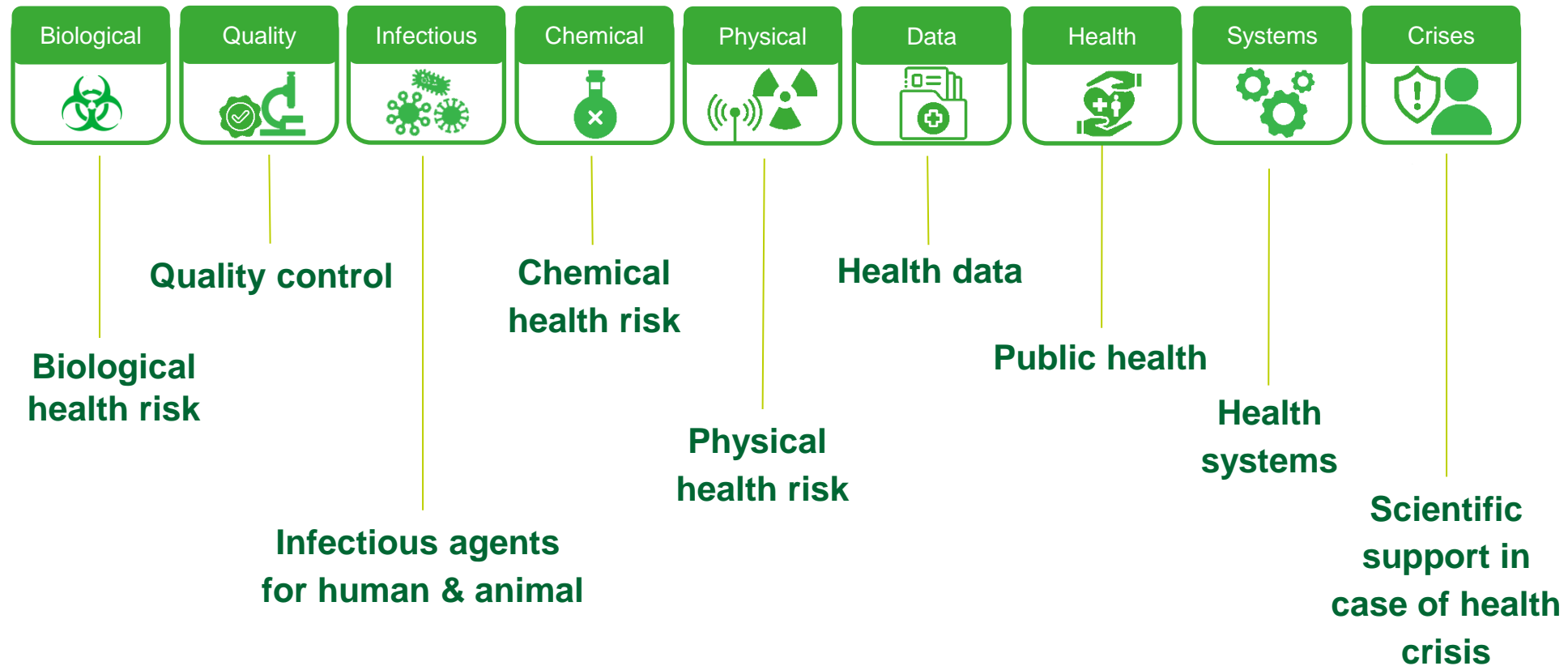


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Verify the quality of
products and services

Area of expertise



Official recognition of laboratories



Belgium

- 15 national reference centers (NRCs)
- 64 national reference laboratories (NRLs)



European Union

- EURL reference laboratory for diseases caused by capripox
- EURL reference laboratory for foot-and-mouth disease
- **EURL Food Improvement Agents**



Food and Agriculture Organization of the United Nations (FAO)

- Reference laboratory for vesicular diseases



World Health Organization (WHO)

- Measles and rubella laboratory
- National Influenza Centre - Global Influenza Surveillance and Response System

Certifications & Accreditations



Official Medicines Control
Laboratory (OMCL)

**EU Directorate
for the Quality of Medicines
& Healthcare (EDQM):**

- Medicines & health products control
- Vaccines control, plasma-derived medicinal products



Belac accreditation

X

ISO 15189 - MED

Quality and Competence in Medical Laboratories

ISO 17025 - TEST

Competence of testing and calibration laboratories

ISO 17043 - PT

Proficiency testing

Organization of external quality assessments (EQAs)



ISO 9001

XXXXX XXXXX XXXXXXX XXX

Quality Management System BCCM/IHEM

937

Collaborators

500 scientists

158 laboratory analysts

175 support collaborators

98 PhD students





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**Epidemiology
and Public
Health**

**Infectious
diseases
in humans**

**Chemical and
Physical
Health Risks**

**Infectious
diseases
in animals**

**Expertise and
Service
Provision**



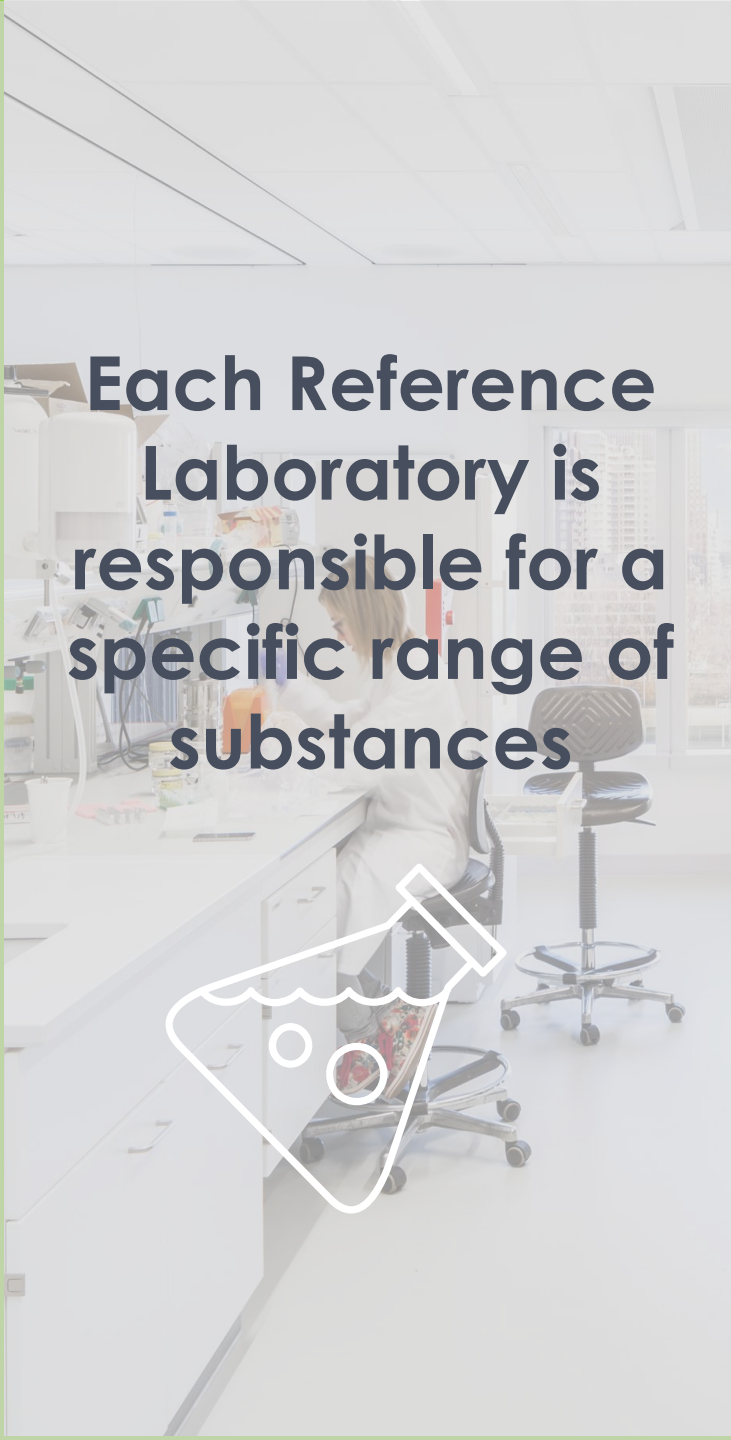
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-----> EURL-FIA

EURL-FIA

2025-2027



Each Reference Laboratory is responsible for a specific range of substances

EURLs are the bridge between the European Commission and EU Member State National Reference Laboratories



The core functions of European Reference Laboratories encompass:

Developing and validating test methods

Conducting independent “arbitral” analyses

Providing expert advice to the European Commission

Supporting the work of National Reference Laboratories

Each Reference Laboratory is responsible for a specific range of substances

EURLs contribute to the harmonisation of laboratory proficiency, thereby mitigating market distortions within the Single European Market.

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EURL-FIA Work programme

Responsibilities and tasks of the EURL are given in Article 94 of Regulation (EU) 2017/625

AVAILABILITY AND USE OF HIGH-QUALITY METHODS

Establishing the EURL-NRLs network

Development and validation of analytical methods

Organisation of Proficiency Tests

Guidance document on method performance requirements and quality control during sample analysis

Standards and Solutions Management

SCIENTIFIC AND TECHNICAL ASSISTANCE TO NRLs

Plenary EURL-NRL meetings

Providing technical assistance to NRLs

Organisation of training

Group activity 1



AVAILABILITY AND USE OF HIGH-QUALITY METHODS

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- Standards and Solutions Management

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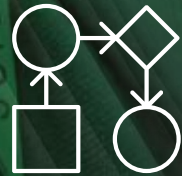
Organisation of training

SCIENTIFIC AND TECHNICAL ASSISTANCE TO THE EUROPEAN COMMISSION AND OTHER ORGANISATIONS

Provide scientific and technical assistance to the European Commission

Cooperation with the European Food Safety Authority and other relevant organisations

Group activity 2



SETTING THE GOALS FOR THE PROCESS

Innovation always begins with a goal in mind. It is many times based on finding the

the problem solving team. This team may consist of you and another person, a group of people, or may even be all of your organization's employees.

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SCIENTIFIC AND TECHNICAL ASSISTANCE TO THE EUROPEAN COMMISSION AND OTHER ORGANISATIONS

Provide scientific and technical assistance to the European Commission

Collaboration with the European Food Safety Authority, laboratories in third countries and Standardisation Bodies

Participation in symposiums, workshops and seminars for the dissemination of scientific information

Group activity 3



The innovation team should work together so that instead of trying to come up with an idea separately, they can bounce ideas off one another and create a collaborative solution. This can include the use of online tools, attendance of events such as trade shows that can be inspiring and informative, or simply consist of brainstorming sessions.

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EURL-NRL network will be
established in 2025

The programme was tailored to be
FLEXIBLE

Elements Used

Some numbers

Elements taken into account



Food Additives

Work programme 2025-2027



MS needs for the EURL-
FIA



Commission Recommendation
(EU) 2023/965 (pilot phase)

Analytical Methods and validation

> 10 FAs methods

Based on the MS needs for the EURL-FIA

&

Pilot phase year 2 of Commission Recommendation
(EU) 2023/965

2025: BHT and sorbic acid and sorbates

2026: metal (oxide) food additives, sweeteners and colours

*2027: Single component method, multi-class FA method, analyse
and characterise the different (nano)forms*



Flexible

Modules

Analytical Methods and VALIDATION

Many guidance documents on method validation are available

There are risks that data generated using non-harmonised validation protocols are not comparable (e.g. LOQ).

Is there a need for specific validation criteria for FA analysis? (e.g. dilution processes)

Also provide quality control parameters to monitor during routine analyses.



Guidance document

Working Group

Validation & QC

Organisation of Proficiency Tests: 3-3-3

Horizontal PT

WHY?

Assess the evolution of the performance of the NRLs

TARGETS

- Different sweeteners (e.g. sucralose, aspartame...)
- But also the overall composition of additives will become more and more complex (e.g. colours, flavours, preservatives, carriers...)
- *As of the 3rd PT (2027), one flavouring substance can be added to the list of FAs*

Specific PT

WHY?

will focus on the scopes and the needs of the different NRLs

TARGETS

it might consist of a more complex matrix

- *Dried soup - antioxidants (e.g. BHT)*
- *Ice cream - colours (e.g. curcumine, Ponceau 4R)*
- *Particle size and shape measurement - E 172 FA in their pristine form*

Technical PT

WHY?

based on the scopes and the needs of the different NRLs but will **be focusing on more technical challenges**

TARGETS

- Reporting non-compliance
- Handling more difficult sample preparation
- Working with processed foods,
- Interpretation of the results such as concentration vs dose for table-top-sweeteners.

EURL-Launch Timeline

3 5 : 0 7 : 2 0 KICK OFF

DAYS HOURS MINUTES

EURL-Launch Timeline

3 5 : 0 7 : 2 0 **KICK OFF**

DAYS HOURS MINUTES

EURL-FIA@sciensano.be