

## **International competence scheme LB 21-01:**

### **Evaluation of results – pesticides and multiple source substances**

#### **Aim**

The evaluation of pesticide results in food is a complex topic, as legal requirements as well as private standards set by stakeholders have to be met.

The topic is becoming even more complex when dealing with so-called multiple source substances – substances which have more than one source, but usually must be evaluated as pesticides.

In order to meet these demands, detailed knowledge on legal and toxicological evaluations is crucial for diligent work.

With this Lach & Bruns competence scheme, both laboratories as well as food business operators will be able to check and prove their competencies in evaluating results of pesticides and related substances, to meet legal and private standards.

This scheme is focussing on the evaluation of

- pesticide results according to legal EU standards and toxicological parameters
- contaminant results according to legal EU standards
- biocides
- contaminants, which have to be judged as pesticides, with the “hot topic” chlorate

As this scheme is designed close to real cases, this competence scheme will contribute to your performances in daily routines.

#### **Evaluation**

Opposed to analytical competence schemes, a quantitative evaluation by applying f. ex. a z-score model or recovery rates is not applicable for this scheme.

Depending on the given task, the answers of the participants will be evaluated related to the legal and toxicological evaluation (MRL, ARfD, etc.) of the particular compound and the related calculations (see examples on page 4).

The answers of the participants will be anonymised and made available in the final report to all participants. The answers will also be compared with each other. Furthermore, the organisers will provide a best practice commentary for each task.

As a new service, Lach & Bruns offers a videoconference to discuss the answers and open questions with the participants.

## **Setup**

Evaluation of analytical results according to the following requirements:

- Maximum Residue Levels for pesticides according to Regulation (EC) No. 396/2005
- Maximum Levels for contaminants according to Regulation (EC) No. 1881/2006
- toxicological evaluation (exhaustion of ARfD, applying EFSA PRIMo 3.1)
- classification of biocidal compounds: Pesticide law applicable?

## **Tasks**

Within this competence scheme, Lach & Bruns will present 3 tasks:

### **1. Pesticide and contaminant results in fresh vegetables**

The participants shall evaluate the results, they will also be asked for relevant details in order to follow and assess the entire way of the results' evaluation.

### **2. Evaluation of biocides**

A current example of biocides present in foodstuff has to be evaluated. Biocides can be multiple source substances as well.

### **3. Evaluation of chlorate (multiple source substance)**

MRLs for chlorate have been introduced into Reg. 396/2005 recently – nevertheless the evaluation often is ambiguous.

Exemplary tasks are given on page 4. For reporting the organisers will provide an electronic template.

## **Evaluation of the competence scheme**

After the closing date the answers of the participants will be assessed. The anonymised answers of the participants will be provided within the final report together with the comments of the organisers.

## **New offer: Discussion of results within a videoconference**

After provision of the final report, Lach & Bruns will offer a discussion of the answers via a videoconference. Duration: approx. 90 minutes. The participation in this videoconference is included in the participation fee.

**Language**

All documents are provided in English language. The participants are required to answer in English as well.

**Costs**

The price for the participation in this competence scheme is **€ 790** (excluding VAT) and includes the participation in the videoconference. After registration an invoice will be issued.

**Registration**

In order to register please fill in the attached form and return it to [info@lach-bruns.de](mailto:info@lach-bruns.de)

**Deadline for registration: June 15th, 2021**

The documents will be sent on June 17<sup>th</sup>, 2021, results must be submitted by July 15<sup>th</sup>, 2021.

**Task 1 (example): Evaluation of pesticide and contaminant results according to legal requirements and toxicological evaluation**

Assumption: You receive the below listed results from the analytical department of the laboratory. Please fill in the tables below and

- evaluate whether the sample complies with legal requirements
- carry out a toxicological evaluation

**Sample: Vegetable, fresh**

Analyte	Result	Related Maximum Level	Related ARfD	Exhaustion ARfD
Compound 1	0.079 mg/kg	_____ mg/kg	_____ mg/kg bw	_____ %
Compound 2	0.035 mg/kg	_____ mg/kg	_____ mg/kg bw	_____ %
Compound 3	0.27 mg/kg	_____ mg/kg	_____ mg/kg bw	_____ %
...				
Heavy metal 1	0.04 mg/kg	_____ mg/kg		
Heavy metal 1	0.08 mg/kg	_____ mg/kg		

**Task 2 (example): Evaluation of biocide results (possibly multiple source substances)**

Assumption: You receive the below listed results from the analytical department of the laboratory. Please evaluate whether the sample complies with legal requirements. Do you consider these substances as biocides?

**Sample: Fresh fruit**

Analyte	Result
Biocide 1	0.029 mg/kg
Biocide 2	0.011 mg/kg

***Task 3 (example): Evaluation of chlorate (multiple source substance)***

Chlorate is a metabolite from certain chlorine-containing disinfectants and can be present in drinking and irrigation water as well as in other foodstuffs, due to cross-contamination from disinfectants. As chlorates have been used as herbicides as well, the compound is regulated under pesticide law within the EU. The EU considered the special situation of chlorate by adding a footnote to Reg. 396/2005.

**Case study:** You receive a result of chlorate present in a particular fresh fruit or vegetable. How would you evaluate this result? Does it comply with legal requirements? What is your recommendation to your client how to act according to this result?