



Vlaamse overheid



## Report Proficiency Study 2015

### Screening of Enterotoxins of *Staphylococcus aureus* in milk

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## 1. INTRODUCTION

This proficiency study concerned the investigation of the detection of enterotoxins of *Staphylococcus aureus* in milk. To get an impression of the performance of the qualitative detection of enterotoxins of *Staphylococcus aureus* in milk, laboratories were invited to join this proficiency study. Three laboratories participated to the study.

The proficiency study was organized in collaboration with the Federal Agency of the Safety of the Food Chain (FASFC) from Belgium in the framework of the tasks as NRL-MMP's.

## 2. TIME-TABLE

Sample preparation	13 October 2015
Sample distribution	19 October 2015
Deadline for sample analysis	7 November 2015
Deadline for reporting results	12 November 2015
Final report	13 November 2015

## 3. SAMPLE PREPARATION

### Spiked samples

#### *Stock solution*

Staphylococcal enterotoxin B from *Staphylococcus aureus* (SIGMA S4881 – Lotnr 098K4138) was used to prepare a stock solution of 1mg/l in water, the purity of the SIGMA product was taken into account. The stock solution was further diluted to obtain the below mentioned concentrations in the spiked samples. The milk used for the sample preparation was whole UHT milk.

*0,5 ng/ml milk samples (Sample 1 and 2)*

*0,1 ng/ml milk samples (Sample 3 and 5)*

### Blanc samples (Sample 4 and 6)

The UHT milk was directly used to prepare the samples.

### Further sample preparation

After thoroughly homogenization in a measuring flask, sub-samples of ca. 40ml were prepared in sterilized plastic containers.

For each participating lab, two blind duplicates of each type of sample (blank, 0,1 ng/ml and 0,5 ng/ml) were taken, and the samples were stored in a freezer at -20°C until and during shipment. Sample shipment was accomplished with help of the Melle dispatching center of the Belgian Food Safety Authority. The Belgian labs picked up their samples at this dispatching centre. The samples for the foreign lab were shipped by DHL.

The participants were also instructed to keep the samples frozen until analysis.

The participants were asked to use 25ml for analysis.

## 4. RESULTS

The results of the laboratories are presented in table I.

**Table I: Results proficiency study 2015, enterotoxins of *Staphylococcus aureus* in milk**

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Sample conc. (ng/ml)	0,5	0,5	0,1	0	0,1	0
Lab 1	+	+	+	-	+	-
Lab 2	+	+	+	-	+	-
Lab 3	+	+	+	-	+	-

- + Means enterotoxins of *Staphylococcus aureus* were detected
- Means no enterotoxins of *Staphylococcus aureus* were detected

## 5. CONCLUSIONS

### Sample 4 and 6

- The results of laboratories 1,2 and 3 correspond with the sample preparation, because no enterotoxins of *Staphylococcus aureus* were detected in these samples.

### Sample 1, 2, 3 and 5

- The results of laboratories 1, 2 and 3 correspond with the sample preparation, because enterotoxins of *Staphylococcus aureus* were detected in these samples.

## 6. METHODS OF ANALYSIS

**Lab 1, 2 and 3** VIDAS SET 2 + sample preparation with dialysis.

## 7. REMARKS FROM PARTICIPANTS

None

## 8. LIST OF PARTICIPANTS

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