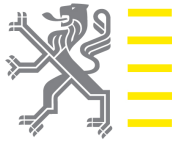


Vlaamse overheid



## Report Proficiency Study 2011

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

25 July 2011

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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. Five 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	17 June 2011
Sample distribution	20 June 2011
Deadline for sample analysis	8 July 2011
Deadline for reporting results	12 July 2011
Final report	25 July 2011

### 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 milk used for the sample preparation was whole UHT milk.

##### *2ng/ml milk samples (Sample 1 and 6)*

2ml of the stock solution (1mg/l) was taken to prepare 1 liter of sample solution.

##### *0,5ng/ml milk samples (Sample 2 and 4)*

0,5ml of the stock solution (1mg/l) was taken to prepare 1 liter of sample solution.

#### **Blanc samples (Sample 3 and 5)**

The milk was directly used to prepare the samples.

#### **Further sample preparation**

After thoroughly homogenization in a measuring flask , sub-samples of 25ml were prepared in sterilized plastic containers.

For each participating lab, two blind duplicates of each type of sample (blank, 0,5 ng/ml and 2 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 used the entire content (25ml) for analysis.

## 4. RESULTS

The results of the laboratories are presented in table I.

**Table I: Results proficiency study 20011, enterotoxins of *Staphylococcus aureus* in milk**

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

+ Means enterotoxins of *Staphylococcus aureus* were detected

- Means no enterotoxins of *Staphylococcus aureus* were detected

## 5. CONCLUSIONS

### Sample 3 and 5

- The results of laboratories 1,2,3,4 and 5 correspond with the sample preparation, because no enterotoxins of *Staphylococcus aureus* were detected in these samples.

### Sample 1,2,4 and 6

- The results of laboratories 1,2,3,4 and 5 correspond with the sample preparation, because enterotoxins of *Staphylococcus aureus* were detected in these samples.

## 6. METHODS OF ANALYSIS

**Lab 1,2,3,4 and 5** VIDAS SET 2

**Lab 4** Ridascreen SET total

## 7. REMARKS FROM PARTICIPANTS

**Lab 1 and 5:** A concentration step was performed using dialysis.

## 8. LIST OF PARTICIPANTS

ILVO – T&V, Melle, Belgium

WIV, Brussels, Belgium

FAVV/AFSCA – LFSAGx, Gembloux, Belgium

One private lab, Belgium

Voedsel en Waren Autoriteit, Eindhoven, The Netherlands