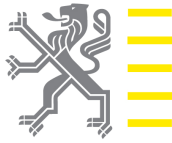


Vlaamse overheid



Report Proficiency Study 2013

Screening of Enterotoxins of *Staphylococcus aureus* in milk

16 July 2013

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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. Four 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	3-7 June 2013
Sample distribution	11 June 2013
Deadline for sample analysis	1 July 2013
Deadline for reporting results	5 July 2013
Final report	16 July 2013

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 2 and 3)

0,1 ng/ml milk samples (Sample 5 and 6)

Blanc samples (Sample 1 and 4)

The milk was directly used to prepare the samples.

Further sample preparation

After thoroughly homogenization in a measuring flask, sub-samples of 40-50ml 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 20013, enterotoxins of *Staphylococcus aureus* in milk

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Sample conc. (ng/ml)	0	0,5	0,5	0	0,1	0,1
Lab 1	-	+	+	-	+	+
Lab 2	-	+	+	-	+	+
Lab 3	-	+	+	-	+	+
Lab 4	Results not usable					

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

5. CONCLUSIONS

Sample 1 and 4

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

Sample 2,3, 5 and 6

- The results of laboratories 1, 2 and 3 correspond with the sample preparation, because enterotoxins of *Staphylococcus aureus* were detected in these samples.
- Lab 4 reported analytical problems for the different samples.

6. METHODS OF ANALYSIS

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

Lab 4 Oxoid method (SET-RPLA)

7. REMARKS FROM PARTICIPANTS

No remarks

8. LIST OF PARTICIPANTS

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