Group work – Self monitoring

Simple methods to check milk quality and the production process
Self Monitoring Measures
play an essential role in the delivery of the food safety management system

How to control the hazards in cheese and dairy products?

- Staff training On:
  - Hazard identification
  - GHPs
  - HACCP-based Plans
  - or Technological aspects (not covered by the guide)

- Hazard identification for milk products
- Good Hygiene Practices (GHPs)
- Good Manufacturing Practice (GMP)
- HACCP-based Plans for each product and process

- Product testing

- Non-Conformity management
- Traceability

Testing during the process and Environmental testing
Self Monitoring Measures
play an essential role in the delivery of the food safety management system

Producers can only assure food safety by the use of a food safety management system. Reliance on end-product testing alone is not sufficient and ineffective.
Self Monitoring Measures
play an essential role in the delivery of the food safety management system

However testing can provide useful information to producers but it is important to distinguish clearly between sampling for validation and sampling to control the production process.
Self Monitoring Measures play an essential role in the delivery of the food safety management system.

To control the production process other forms of testing may be appropriate. This could involve sensory, microbiological, physical or chemical testing.

- Staff training on:
  - Hazard identification
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- Hazard identification for milk products

- Good Hygiene Practices (GHPs)

- Good Manufacturing Practice (GMP)

- HACCP-based Plans for each product and process

- Testing during the process and Environmental testing

- Product testing

- Non-Conformity management

- Traceability
Self Monitoring Measures
The food safety management system should set out self-monitoring measures appropriate to each stage of the production process.

Food Safety Management System

Self-monitoring measures appropriate to each stage of the production process

Examples

Hazard identification for milk products

Testing on Antibiotics in milk

Good Hygiene Practices (GHPs)

Regular inspection and maintenance of the milking machine

Staff training

How to use detergents

Good Manufacturing Practice (GMP)

Acidification of a product

Staff training

Check of °SH and pH
Self Monitoring Measures
The food safety management system should set out self-monitoring measures appropriate to each stage of the production process.

Food Safety Management System

Self-monitoring measures appropriate to each stage of the production process

HACCP-based plans

Examples

Check of Coagulation ability
Check of heat treatment

Testing during the process and Environmental testing

Monitoring of smear water

Staff training

How to take smear water samples correctly

Analysis during the production process to control the production process

Product testing with n=1

Verification and validation of the food safety management system

Product testing with n=5

How to take smear water samples correctly
How to explain and train self monitoring measures?

Design a group work to demonstrate the variety of appropriate self-monitoring measures.
Procedure

• Select test stations appropriate to demonstrate self-monitoring measures at different stages of the production process.

• Prepare modified milk samples (e.g. add E. coli, alkaline detergent, antibiotics, etc.).

• Each trainee gets 2 milk samples and has to do all tests.

• The trainer is present and gives advise if trainees need some help

• It’s the trainees responsibility to record the results!!!

• All records are shared at the end and the results are discusses within the whole group
Test stations (examples)

Test Station 1: Sensory test
Check of appearance and smell

Test Station 2: Acidity test
Check of °SH and pH

Test Station 3: Fermentation test
Assessment of fermented milk samples, Check of pH after fermentation

Test Station 4: E-coli test
Assessment of E-coli-Petrifilm

Test Station 5: Antibiotic test
Testing on antibiotics in milk

Test Station 6: Alkaline Phosphatase test
Check of heat treatment

Test Station 7: Coagulation test
Check of coagulation ability

To demonstrate self-monitoring measures appropriate to a stage of the production process you can add, delete or replace test stations.
Milk samples

To demonstrate self-monitoring measures appropriate to a stage of the production process you have to prepare modified milk samples.
**Assessment form**

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<thead>
<tr>
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<th>Station 1</th>
<th>Station 2</th>
<th>Station 3</th>
<th>Station 4</th>
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<tbody>
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**Assessment form**

(+) suitable for cheesemaking

(±) no statement possible;

(-) not suitable for cheesemaking

- Each trainee gets 2 milk samples and has to do all tests.
- The trainer is present and gives advise if trainees need some help.
- It’s the trainees responsibility to record the results!!
- All records are shared at the end and the results are discusses within the whole group.
To start with the test station parcours

1. All test stations have to be prepared in advance.
2. Take time to explain each test station to the trainees.
3. Trainer has to be present all the time to answer questions of trainees.
Test station 1: Sensory test

Check of appearance and smell
Test station 2: Acidity test

Check of SH- and pH
Test station 3: Fermentation test

Assessment of fermented milk samples and check of pH after fermentation
Test station 4: E-coli test
Test station 5: Antibiotic test

Testing on antibiotics in milk
Test station 6: Alkaline phophatase test

Check of heat treatment
Test station 7: Coagulation test

Check of Coagulation ability
How to organise the training?

• Time schedule
• Procedure instruction (for teachers)
• Procedure instruction (for trainees)
• List of required milk samples & equipment
• Assessment for (for trainees)

For all examples given in this presentations the tools are available