

3317 Principles of heat treatment in dairy processing

SQA Unit Code

H3KF 04

Level 3

SCQF Level 6

SCQF Credit value 3

Unit Summary

This standard is about the principles of heat treatment in dairy processing in food and drink manufacture and/or supply operations. The principles of heat treatment in dairy processing including pasteurisation, sterilisation and Ultra High Temperature (UHT) is important in providing an underpinning knowledge to the production of milk, cream, butter, fermented dairy products, ice cream, cheese and other dairy products.

You will need to know and understand the principles underpinning the heat treatment of dairy products, why dairy products are heat treated and the different heat treatment methods and equipment commonly used in the dairy industry.

This standard is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of the principles of heat treatment in dairy processing.

In order to be assessed as competent you must demonstrate to your assessor that you can consistently perform to the requirements set out below. Your performance evidence must include at least one observation by your assessor.

Evidence of knowledge and understanding should be collected during observation of performance in the workplace. Where it cannot be collected by observing performance, other assessment methods should be used.

You need to know and understand:

1. why dairy products are heat treated
2. the effect of heat treatment on dairy products shelf life, flavour and nutritional value
3. the key features of pasteurisation in dairy processing
4. typical time/temperature combinations used to pasteurise dairy products
5. the key differences between plate and tunnel pasteurisation equipment
6. the key features, equipment and time/temperature combinations used in the sterilisation of dairy products
7. the effect of sterilisation on the final dairy product
8. commonly used equipment and time/temperature combinations used in Ultra-High Temperature (UHT) dairy processing
9. typical time/temperature combinations used in UHT processing
10. dairy products that commonly undergo pasteurisation, sterilisation and UHT processing

11. advantages and disadvantages of pasteurisation, sterilisation and UHT processing of dairy products

12. why thermisation is used in the production of fermented dairy products

Evidence of performance may employ examples of the following assessment:

- observation
- written and oral questioning;
- evidence from company systems (e.g. Food Safety Management System)
- reviewing the outcomes of work
- checking any records of documents completed
- checking accounts of work that the candidate or others have written