

3315 Principles of dairy science

SQA Unit Code

H3KD 04

Level 3

SCQF Level 6

SCQF Credit value 3

Unit Summary

This unit is about the principles of dairy science in food and drink manufacture and/or supply operations. The principles of dairy science are important in providing an underpinning knowledge to the specific processes carried out in the dairy industry to produce milk, cream, butter, cheese, yoghurt and other dairy products.

You will need to know and understand the principles of dairy science underpinning the production of dairy products.

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

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. the structure and biochemistry of milk
2. the approximate percentages of protein, fat and lactose in cow, goat and sheep's milk
3. the basic chemical structure of milk protein, fat, and lactose
4. the factors affecting the percentages of protein, fat and lactose in milk
5. the nutritional value of milk and dairy products
6. the effect of fat content on the flavour, texture, physical properties, yield and further processing of dairy products
7. the affect of protein content on flavour, texture, physical properties, further processing and yield of dairy products
8. the affect of lactose content on flavour, texture, physical properties, further processing and yield of dairy products
9. how temperature and ph can affect the physical properties of milk and dairy products
10. the importance of milk protein, fat and milk solids non fat content to the regulations relating to the production of milk, butter, cream, ice cream and cheese

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