

642 Principles of basic statistical analysis in a food environment

SQA Unit Code

H15M 04

Level 3

SCQF Level 5

SCQF Credit value 3

Unit Summary

This unit is about understanding the principles and application of basic statistical analysis as part of your organisation's drive to achieve excellence in food and drink manufacture and/or supply operations. This is important to the productivity and success of manufacture, processing and supply of food and drink within the food supply chain. Understanding current operational practice is central to the implementation of change, improvement, new practice, targets and a performance driven culture.

You will need to understand basic statistics, and provides an informed approach to the analytical techniques and procedures used within your organisation. You will need to know how to accurately present findings of analysis to relevant people within the organisation, including senior management. You will need to comply with your company policy for improvement, take responsibility for your actions, and refer any issues outside of the limit of your authority to others.

This unit is for you if your role requires you to analyse the performance of current operational practice in food and drink manufacture or supply. You may be a front line manager or supervisor and/or have responsibilities for all or part of the production/supply process.

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.

You need to know and understand:

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.

1. How the health, safety and hygiene requirements of a work area can influence the process of analysis
2. The food/drink processing activity that is being analysed
3. How to use basic statistical techniques
4. The meaning of 'variation', and how this can be detected with statistics
5. How variation can affect a process
6. Why data points are important to statistics
7. Why we need to use basic statistics
8. The meaning of the terms 'population' and 'sample' when applied to basic statistics
9. Distribution curves and the properties of a normal curve
10. The creation and use of charts and diagrams

11. How to calculate mean, median, mode, standard deviation, range and variance
12. The difference between descriptive and inferential statistics
13. Levels of authority linked to problem solving

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