

659 Principles of capability studies in a food environment

SQA Unit Code

H16H 04

Level 3

SCQF Level 6

SCQF Credit value 3

Unit Summary

This unit is about the understanding the principles of capability studies as part of your organisation's drive to achieve excellence in food and drink manufacture and/or supply operations. This is important to the manufacture, processing and supply of food and drink within the food supply chain, where for example food safety is a critical factor.

You will need to understand the principles behind the capability studies and the business benefits of using them during an achieving excellence programme. You will need to understand sigma scores and how to calculate them, and how to select an appropriate sample within your area of responsibility. You will need to know how to comply with your company policy for improvement, understand how to 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 understand the principles of a capability study in food and drink manufacture or supply. You may be a line manager or supervisor and/or have responsibilities for all or part of the production/supply process and for promoting improvements.

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 capability studies
2. Why we need to assess process capability, and how this affects a Six Sigma project
3. The meaning of the term 'sigma score' (Z)
4. How the sigma score (Z) is calculated and used to estimate the percentage outside of specification
5. Cp and Cpk, and how are they calculated
6. How long-term capability is calculated from short term data
7. The number of samples needed for a statistically valid short-term capability study
8. The meaning of a 'population' and a 'sample'
9. How to select an appropriate sample size
10. How parts per million are calculated
11. How to calculate mean, median, mode, standard deviation, range, and variance
12. How to perform rational sub-grouping

13. Levels of authority linked to problem resolution

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