IMPQI253

Apply basic statistical analysis to support improvement in food and drink operations

Overview

This standard is about the skills and knowledge needed to apply the basic statistical analysis as part of your organisation's drive to increase the effectiveness and productivity of food and drink operations. This is important in the achievement of excellence and the success of manufacture, processing and supply across the food and drink supply chain.

You will need to apply and understand basic statistics, and provide an informed approach to the analytical techniques and procedures used within your organisation. You will need to show and know how to present findings of analysis to relevant people within the organisation, including management colleagues. You will need to know how 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 standard is for you if you work in food and drink operations including, manufacturing, processing, packing or supply chain activities. You may have responsibilities for aspects of organisational improvement in a team leadership or management role.

Performance criteria

You must be able to:

Prepare for analysis

1. confirm and agree the defined scope of analysis with the relevant personnel
2. check and confirm that basic statistical analysis is most appropriate to support the analysis required with the relevant personnel
3. obtain information, documentation and resources necessary to support the analysis in accordance with procedures
4. communicate the purpose of the analysis to the relevant personnel

Carry out analysis to support improvement activity

5. use approved methodology to apply the analysis and collect performance data on work activities in accordance with the improvement plan
6. analyse and evaluate performance data in accordance with the improvement plan

Report improvement opportunities

7. present the findings of the basic statistical analysis to the relevant personnel
8. make recommendations about improvement opportunities and targets resulting from the analysis findings to the relevant personnel

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Knowledge and understanding

You need to know and understand:

1. the organisation's improvement vision, strategy, objectives and the reasons for implementation of improvement programmes
2. how the health, safety and hygiene requirements of a work area can influence the process of analysis
3. the food and drink operational activity that is being analysed
4. how to use basic statistical techniques
5. the meaning of `variation', and how this can be detected with statistics
6. how variation can affect a process
7. why data points are important to statistics
8. why we need to use basic statistics
9. the meaning of the terms population' and sample' when applied to basic statistics
10. distribution curves and the properties of a normal curve
11. the creation and use of charts and diagrams
12. how to calculate mean, median, mode, standard deviation, range and variance
13. the difference between descriptive and inferential statistics
14. levels of authority linked to problem resolution
15. the use of statistical measurement and meanings, abbreviations and symbols in the collection of performance data
16. how to use graphical data representation in data analysis
17. how to interpret and evaluate data
18. how to present analysis findings
19. how to make recommendations about improvement opportunities and targets

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