

EM127 Carry out condition monitoring of plant and equipment used within food and drink operations

SQA Unit Code

HD5V 04

Level 3

SCQF Level 6

Credit value 37

Unit Summary

This standard identifies the competences you need to carry out condition monitoring of plant and equipment used in food and drink operations, in accordance with approved procedures. You will be required to select the appropriate monitoring equipment to use, based on the type of plant or equipment being monitored and the conditions you wish to check. You will be expected to check that the equipment is in a suitable condition to use (such as undamaged, correctly calibrated, appropriate range) and set up the equipment ready for use. You will then use this equipment to carry out diagnostic condition monitoring (fault diagnosis or prognosis) on a range of equipment such as mechanical, electrical, process controller, fluid power or integrated systems. Food and drink operations is a term used in this standard to cover the following sub sectors of Meat, Drinks, Confectionery, Fresh Produce, Bakery, Seafood and Dairy.

Your responsibilities will require you to comply with organisational policy and procedures for the condition monitoring activities undertaken, and to report any problems with the diagnostic equipment or monitoring activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with minimal supervision, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

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 must be able to:	You need to show:
<p>1. Carry out condition monitoring of plant and equipment used within food and drink operations</p> <p>This means you:</p> <p>Work safely at all times, complying with health and safety and other relevant food and drink regulations, directives and guidelines</p> <p>Correctly set up and check-calibrate the</p>	<p>Evidence must be work-based, simulation alone is only allowed where shown in <i>bold italics</i></p> <p>Evidence of carrying out condition monitoring of plant and equipment used within food and drink operations as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.</p>

<p>equipment required for the monitoring being carried out</p> <p>Carry out the monitoring activities with the minimum disruption to normal activities</p> <p>Review the monitoring outcomes and take appropriate actions</p> <p>Record the results of the monitoring activities</p>	
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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. the specific health and safety precautions to be applied during the monitoring procedure, and their effects on others
2. the food and drink related health and safety requirements of the area in which the monitoring activity is to take place, and the responsibility these requirements place on you not to compromise food safety
3. hazards associated with carrying out monitoring activities on plant and equipment (including electrical supplies, moving machinery, process controller interface, using damaged or badly maintained tools and equipment, not following laid-down procedures), and how to minimise these and reduce any risks
4. the requirements of the BRC guidelines and standards in relationship to the maintenance activities
5. the specific requirements of your customer/client specifications in relationship to the maintenance activities
6. your responsibilities in relationship to Hazard Analysis and Critical Control Points (HACCP, TACCP and VACCP) during the maintenance activities
7. the importance of wearing protective clothing and other appropriate safety equipment (PPE) during the monitoring activities
8. how to obtain and interpret drawings, charts, specifications, manufacturers' manuals, history/maintenance reports, symbols used on monitoring instrument documents, and other documents needed in the monitoring/maintenance process
9. the basic principles of how the plant or equipment to be monitored functions, its operating sequence, the working purpose of individual units/components and how they interact
10. the principles of the equipment's design features for safe operation in a food or drink environment such as minimising the chance of contaminants or foreign bodies in the final product
11. the basic principles of condition monitoring, and how it helps prevent equipment failure
12. the different types of monitoring component or sensor (including temperature, force, pressure, vibration, rotational, voltage, current), their fittings, and their application
13. the various monitoring systems, and the methods that can be employed to make

- test measurements for the purposes of machinery protection or predictive maintenance
14. methods of attaching monitoring components to different parts of the plant, equipment or system
 15. the need to check that monitoring instruments are fit for purpose, undamaged, and have a suitable monitoring range and value
 16. the importance of monitoring equipment calibration and authorisation procedures
 17. the need to set up and operate condition monitoring equipment correctly
 18. care and control procedures for condition monitoring equipment, including their safe/hygienic storage before use
 19. the processes in place to segregate the tools and equipment used into high or low risk areas
 20. the checks required to ensure that all tools, materials and components are all accountable before operating the equipment
 21. the problems that can occur during the monitoring activity, and how they can be overcome
 22. recording the results from conditioning monitoring, and the documentation to be used
 23. control procedures for reporting the results from condition monitoring
 24. the organisational procedure(s) to be adopted for the safe disposal of waste of all types of materials including any spoiled food or drink products
 25. the extent of your own authority and to whom you should report if you have a problem that you cannot resolve

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