

Carry out testing for quality control in milling

Overview

This standard is about the skills and knowledge needed for you to carry out testing for quality control in milling.

You need to follow relevant policies and procedures that apply to your area of work and report on the quality of work activities against specifications. You need to organise work to meet schedules and targets, and make effective use of resources. You also need to identify, record and report any problems affecting the volume of throughput. You will contribute to identifying opportunities for improving food and drink operations. You will identify improvement opportunities by suggesting ideas and contribute to developing an action plan.

You will need to understand how to test raw material e.g. wheat, on delivery, which will then be milled into another product e.g. flour. You need to know about testing procedures and the controls in the testing process; what procedure should be followed if there is a non-conformance found on testing; how to prepare products for testing; and how to record test results.

You will also need to understand laboratory tests on wheat and flour that are crucial to the quality of the final product. You will need the technological understanding of routine tests and procedures that are required to make sure wheat and flour reach a specified standard. You will also need to know how to interpret the results of these tests.

This standard is for you if you work in food and drink manufacture and/or supply operations and are involved in testing of raw material for milling carried out at or around the point of delivery.

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Performance criteria

You must be able to:

1. check that there are sufficient resources available to complete testing activities within your own area of responsibility
2. check that testing equipment is working effectively
3. carry out testing in accordance with current legal and regulatory requirements for hygiene and environmental standards or instructions
4. monitor work activities to meet testing requirements and to identify any variances against specifications
5. complete all relevant testing and report as appropriate
6. handle, store and dispose of materials in accordance with organisational requirements
7. report all variances outside of specification to relevant person(s)
8. identify and report opportunities for improvement of work activities to relevant person(s)
9. identify implications of changes to make sure that the change is documented
10. gather information about potential improvements
11. identify and make positive suggestions about areas for improvement
12. share your ideas for improvement with the relevant people and react positively to feedback you receive
13. communicate your finalised ideas in sufficient detail to enable further action to be agreed
14. work with others to agree an action plan for putting improvement ideas into action
15. make a positive contribution to putting the plan into action
16. test and check improvements to find out how effective they are before recommending further action
17. evaluate the effectiveness of improvements that have been introduced
18. access information from appropriate sources to support your report and recommendations
19. communicate recommendations to relevant people
20. complete records in accordance with organisational requirements

Knowledge and understanding

You need to know and understand:

Test incoming raw materials for milling

1. what the purpose of testing raw material used in milling is
2. the basic methods used for testing in milling
3. what the procedures are for testing
4. how to check the testing equipment is working properly
5. how to use the testing equipment
6. what the operational and regulatory requirements are for testing product quality
7. what the health and safety requirements and procedures for testing are
8. what the controls are in the testing process
9. why raw material is tested in controlled conditions
10. what the procedures are in cases of non-conformance
11. how and where to record test results and how to generate relevant reports on quality trends

Wheat and wheat flour laboratory testing

12. what the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions are and what may happen if they are not followed
13. what routine tests are carried out on wheat and flour and their purpose
14. how to carry out initial sample appearance tests and what this indicates about the consignment
15. how to measure sample purity and the significance of this
16. how to measure moisture content, including oven test, and its significance
17. how to establish how much of the protein content of wheat is functional gluten protein, how this is measured, and factors which affect protein quality
18. how to establish protein content and quality
19. how to measure hardness of wheat, including by single kernel and Stenvert test, and why this is significant
20. what the Hagberg falling number test measures, how to carry it out and its significance
21. how to measure the specific weight of wheat, including by Kern,

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- what affects it and its significance
- 22. what information variety identification provides and how it is carried out
- 23. how to carry out reference tests on wheat and flour
- 24. how to test protein and moisture in flour by NIR including starch damage, ash, colour, water absorption and Hagberg falling number

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