

## Overview

This standard is about the skills and knowledge needed for you to control malt handling and milling in brewing.

This standard details the skills and understanding needed when physically changing the properties of a product through organic or physical processes. It details the skills required to start up, run and shut down equipment, as well as being able to take the appropriate action should operating problems occur. It is also about working to product specifications and production schedules.

The standard also covers understanding the principles of malt handling and milling in the preparation of raw materials for brewing. It covers the malting of barley, its selection according to beer type, the main quality control parameters for malt, the types of malt and adjunct in common use, their significant differences, reasons and methods of use.

This standard is for you if you work in brewing and are involved in malt handling and milling.

## Performance criteria

*You must be able to:*

### **Prepare for malt handling and milling**

1. prepare for malt handling and milling in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
2. check product specifications at the right time
3. set up equipment according to specification
4. check that material for milling is available and fit for use
5. check that services meet requirements
6. start up the plant and check that it is running to specification
7. take action in response to operating problems
8. maintain communication in accordance with organisational procedures

### **Carry out malt milling**

9. carry out malt milling in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
10. use equipment and check that it is supplied with materials and services
11. achieve the required output to the correct specification
12. check the product is transferred to the next stage in the manufacturing operation
13. take action in response to operating problems within the limits of your responsibility
14. maintain communication in accordance with organisational procedures

### **Finish malt milling**

15. finish malt milling in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
16. time shut down in accordance with relevant specifications
17. follow procedures to shut down equipment
18. deal with items that can be re-cycled or reworked
19. dispose of waste in line with organisational requirements
20. make equipment ready for future use after completion of the

process

21. maintain communication in accordance with organisational procedures
22. complete all necessary documentation in line with organisational requirements

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### Knowledge and understanding

*You need to know and understand:*

1. the organisational health and safety, hygiene, environmental and quality standards and instructions
2. the personal protective equipment required
3. the work area tools and equipment needed
4. why it is important to check the cleanliness of work area, tools and equipment
5. what the role of barley as a principal source of starch is
6. what the special attributes of barley for malting are
7. the significant changes that occur when the barley grain is malted
8. what the principal constituents of malt are
9. what the key malt parameters of degree of modification, extraction, moisture content, and colour are
10. how malt is selected for beer type and what the relevant method is for mash conversion
11. what the pre-acceptance checks at malt intake are
12. what the reasons for the use of adjuncts are
13. what the types of adjunct are and their method of use
14. what the typical usage rate as a proportion of the grist is
15. what the significance of grist fraction analysis is and its assessment
16. what the operating principles of malt mills are
17. the different types of milling technologies and applications
18. the malt preparation equipment and processes used for malting
19. what the types of coloured malts are and their characteristics
20. what the typical uses of coloured malts are
21. what the purposes of milling are with respect to the type of mashing and mash separation systems used
22. an awareness of co-product handling requirements
23. how to deal with waste materials in accordance with organisational requirements
24. the need for records to be completed within agreed timescales and to an agreed standard
25. what should be communicated, to whom and why it should be done
26. the limits of your authority and the consequences of exceeding them

## Control malt handling and milling in brewing

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