

Overview

This standard is about the skills and knowledge needed for you to control mashing and conversion in brewing. This standard details the skills and understanding needed when manufacturing part or finished products from a raw material. 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. Complying with and understanding health and safety, food safety and organisational requirements are essential features of this standard. It details the skills needed to monitor and control the water sourcing process in brewing. It also covers the different types of water and water sources used in brewing and the impact they have on legal, organisational, health and safety and environmental regulations. An understanding of the principles of sourcing water, water treatment and effluent in brewing is required. It covers the regulatory requirements, water sources and quality, water characteristics and treatment, and effluent control. This standard also covers understanding the principles of mashing and conversion in brewing. It covers the conversion of starch into simple sugars in the mash, the role and function of enzymes, the significance of time and temperature in mashing and conversion and the significance of mineral salts in mashing. This standard is for you if you work in brewing and are involved in mashing and conversion in brewing.

Performance criteria

You must be able to:

Carry out water sourcing in brewing

1.
carry out water sourcing in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
2.
identify the different types of water used in brewing
3.
monitor the introduction of water into the brewing process
4.
monitor the quality of a brewery water supply
5.
identify the sources of water for a brewery and the characteristics of each in terms of mineral ion content, consistency and possible non-microbiological contaminants
6.
monitor and control the health risks associated with legionella bacteria in cooling water and service water
7.
monitor and control water chlorination, softening, deionization and de-aeration in a treatment plant
8.
monitor and control effluent quality in terms of volume, Suspended Solids (SS), Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), pH and temperature
9.
reduce effluent loading from the principal effluent sources
Prepare for mashing and conversion
10.
prepare for mashing and conversion in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
- 11.

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check product specifications at the right time

12.

set up equipment according to specification

13.

check that material for mashing and conversion is available and fit for use

14.

check that services meet requirements

15.

start up the plant and check that it is running to specification

16.

take action in response to operating problems

17.

maintain communication in accordance with organisational procedures

Carry out mashing and conversion

18.

carry out mashing and conversion in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions

19.

use equipment and check that it is supplied with materials and services

20.

achieve the required output to the correct specification

21.

check the product is transferred to the next stage in the manufacturing operation

22.

take action in response to operating problems within the limits of your responsibility

23.

maintain communication in accordance with organisational procedures

Finish mashing and conversion

24.

finish mashing and conversion in accordance with the legal or

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regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions

25.

check the specifications to time shut down accurately

26.

follow procedures to shut down equipment

27.

deal with items that can be re-cycled or reworked

28.

dispose of waste in line with organisational requirements

29.

make equipment ready for future use after completion of the process

30.

maintain communication in accordance with organisational procedures

31.

complete all necessary documentation in line with organisational requirements

Knowledge and understanding

You need to know and understand:

1.
the organisational health and safety, hygiene, environmental and quality standards and instructions
 - 1.1
the personal protective equipment required
 - 1.2
the work area tools and equipment needed
 - 1.3
why it is important to check the cleanliness of work area, tools and

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