
Overview

This standard covers the skills and knowledge needed for you to carry out filtration and dilution for chilled and filtered beer in brewing.

This standard details the skills needed for partially or fully removing constituent parts from the whole. 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.

This standard also covers understanding the principles of filtration and dilution for reducing high gravity beers to sales gravity in brewing. It covers the regulatory requirements, filtration principles and function, dilution specifications and blending.

Complying with and understanding health and safety, food safety and organisational requirements are essential features of this standard.

This standard is for you if you are involved in controlling segregation and maintaining integrity and require a broad knowledge and understanding of beer filtration and the dilution of high gravity beer to sales gravity in brewing.

Performance criteria

You must be able to:

Prepare for segregation

1. prepare for segregation 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 segregation 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 effective action in response to operating problems
8. maintain communication in accordance with organisational procedures

Carry out segregation and maintain integrity

9. carry out segregation and maintain integrity in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions when carrying out segregation and maintaining integrity
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 effective action in response to operating problems within the limits of your responsibility
14. maintain communication in accordance with organisational procedures

Finish segregation and maintain integrity

15. finish segregation and maintain integrity in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
16. time shut down according to specifications
17. follow procedures to shut down equipment
18. deal with items that can be re-cycled or re-worked
19. dispose of waste in accordance with organisational requirements

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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

Knowledge and understanding

You need to know and understand:

1. the organisational health and safety, hygiene, environmental and quality standards and instructions
2. the work area tools and equipment needed
3. why it is important to check the cleanliness of work area, tools and equipment
4. what the purposes of filtration are
5. the principles of filtration including sieving, depth and absorption
6. the origin, nature and preparation of filter aids, including diatomaceous earth (kieselguhr and perlite)
7. what the operating principles of rough beer filters are
8. what the operating principles of polishing filters are
9. the sequence of events in a typical filtration system
10. how to interpret a filtration flow diagram
11. what the health and safety hazards are associated with filter aids
12. the personal protection and the plant safety features necessary during filtration
13. the technical reasons for brewing at high gravity
14. what the quality specifications for water used for dilution are
15. what additions are necessary to achieve final product specifications
16. how to calculate blending quantities
17. how to deal with waste materials in accordance with organisational requirements
18. the need for records to be completed within agreed timescales and to an agreed standard
19. what should be communicated, to whom and why it should be done
20. the limits of your authority and the consequences of exceeding them

Developed by	NSAFD
Version Number	2
Date Approved	January 2019
Indicative Review Date	January 2024
Validity	Current
Status	Original
Originating Organisation	Improve
Original URN	IMPPO209 (skill), IMPBW116K
Relevant Occupations	Food Preparation Trades; Manufacturing technologies; Process Operatives; Process, Plant and Machine Operatives; Plant and Machine Operatives
Suite	Brewing
Keywords	Food; drink; manufacturing; brewing; filtration; dilution; filtered; beer; sieving
