
Overview

This standard is about the types of sugars refined from cane and beet sources, where they are obtained and how they are produced. You need to know the principle uses of sugar in confectionery manufacture, the sugar alternatives which can be used and how product sweetness can be affected.

This standard is about applying heat to bring about a change in the condition of a product. It details the skills required to start up, run and shut down equipment, as well as being able to take 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.

This standard is for you if you require a basic knowledge of the sources, refining and uses of sugar in confectionery manufacturing.

Performance criteria

You must be able to:

Prepare for refining

1. prepare for refining 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 heat treatment 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 requirements

Carry out refining

9. carry out refining 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 requirements

Finish refining

15. finish refining in accordance with the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
16. check the specifications to time shut down
17. shut down equipment in accordance with organisational procedures
18. deal with items that can be re-cycled or reworked
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 requirements
 22. complete all necessary documentation in accordance with organisational procedures

Knowledge and understanding

You need to know and understand:

1. 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
2. the potential food safety risks, allergens and control procedures associated with refining and using sugars in confectionery manufacture
3. the purpose and importance of heat treatment
4. the properties and uses of sugar in the confectionery manufacturing process
5. the different sources of sugar, such as sugar cane and beet, and where they are grown
6. the principle stages of the sugar refining process, how brown sugar is obtained and the reasons for its use in particular processes
7. the different forms of sucrose and how crystal size is important in the refining process
8. the different types and forms of brown sugars and their typical uses in sugar confectionery
9. the differences and uses of sucrose, dextrose, fructose, maltose, honey, maple syrup glucose syrup and invert syrup
10. how the taste sensation of sweetness can be affected by other factors
11. what equipment and tools to use and their correct condition
12. what materials to use and in what quantity
13. how to obtain and interpret the relevant process or ingredient specification
14. what recording, reporting and communication is needed and how to carry this out and the reasons why it is important to do so
15. what action to take when the process specification is not met
16. how to carry out the necessary pre start checks and why it is important to do so
17. how to follow the start up procedures for heat treatment and why it is important to do so
18. how to obtain the necessary resources for heat treatment
19. how to follow work instructions and why it is important to do so
20. common sources of contamination during processing, how to avoid these and what might happen if this is not done

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21. how to operate, regulate and shut down the relevant equipment
 22. when it is necessary to seek assistance and how to seek it
 23. how to follow the relevant process control procedures and why it is important to do so
 24. what the limits of your own authority and competence are and why it is important to work within them
 25. how to deal with items that can be re-cycled or re-worked
 26. how to dispose of waste
 27. how to make equipment ready for future use

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