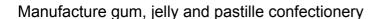


#### **Overview**

This standard covers the manufacture of gums, jellies and pastilles. This includes measuring and mixing, cooking, depositing, stoving and demoulding as well as the packing and finishing process. It also covers the importance of checking the quality of the product.

This standard covers use of gelling agents in the manufacture of jellies, gums and pastilles. The gelling agent is a key ingredient and different agents are used in the production of different types of sweet confectionery.

It also covers the ingredients which are used in producing gums, jellies and pastilles. It covers why these ingredients are used and what happens to them during the cooking process. Also, why it is important to get the right balance of ingredients at the start of the process, and what the effect can be if this does not happen.





#### Performance criteria

#### You must be able to:

# Prepare for producing gums, jellies and pastilles

- 1. prepare to produce gums, jellies and pastilles 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 producing gums, jellies and pastilles 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 production of gums, jellies and pastilles

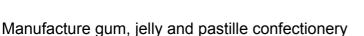
- 9. carry out the production of gums, jellies and pastilles according to the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
- use equipment and check that it is supplied with materials and services
- 11. measure and mix product in accordance with specifications
- 12. cook the product using open-pan or continuous cooking method
- check the quality of product during cooking in line with organisational requirements
- 14. deposit the product following cooking
- 15. undertake stoving in accordance with specifications
- 16. mould products according to organisational requirements
- 17. check the product is transferred to the next stage in the manufacturing operation
- 18. take action in response to operating problems within the limits of your responsibility
- maintain communication in accordance with organisational requirements

#### Finish production of gums, jellies and pastilles

20. finish production of gums, jellies and pastilles in accordance with



- the legal or regulatory requirements, the organisational health and safety, hygiene and environmental standards and instructions
- 21. shut down equipment in accordance with organisational procedures
- 22. deal with items that can be re-cycled or reworked
- 23. dispose of waste in accordance with organisational requirements
- 24. make equipment ready for future use after completion of the process
- 25. maintain communication in accordance with organisational requirements
- 26. complete all necessary documentation in accordance with organisational procedures





# Knowledge and understanding

You need to know and understand:

- the potential food safety risks, allergens and control procedures associated with manufacturing gum, jelly and pastille confectionery
- 2. what the process and main manufacturing stages are for producing jellies, gums and pastilles
- 3. what the different types of measuring and mixing processes are
- 4. what the critical quality checkpoints are in the measuring and mixing process
- 5. what the differences are between open-pan and continuous cooking
- 6. what the different types of cooker used are and the principles on which they work
- 7. what the critical quality checkpoints are during cooking
- 8. what the depositing, stoving and demoulding cycle is
- what the critical quality checkpoints are during depositing, stoving and demoulding cycle
- 10. why starch is used for moulding and when starchless moulding might be used
- 11. what the different finishing processes are
- 12. what the causes of rework are
- 13. how rework can be incorporated back into the cooking process
- 14. how rework could be avoided
- 15. what the definition of a gelling agent is in the context of sweet confectionery manufacture
- 16. how molecules of a gelling agent rearrange when gelation occurs
- 17. what the five main gelling agents used in confectionery are and their sources
- 18. which gelling agents are used in which products, their different properties and the benefits of each
- 19. how gelling agents behave in these manufacturing stages
- 20. how and when gelling agents are quality checked
- 21. the consequences of using agents that do not comply with company specifications
- 22. the main ingredients in a gum, jelly and pastille and what function they have in the confectionery product
- 23. the basic recipes for gum, jelly and pastille making
- 24. the key differences in ingredients and eating experience between



- gums, jellies and pastilles
- 25. how different cooking methods will affect recipes
- 26. why it is important that ingredients are carefully measured, and what the effect would be if this does not happen
- 27. what recording, reporting and communication is needed and how to carry this out and the reasons why it is important to do so
- 28. what action to take when the process specification is not met
- 29. how to carry out the necessary pre start checks and why it is important to do so
- 30. how to follow the start up procedures for conditioning and why it is important to do so
- 31. how to obtain the necessary resources for producing gum, jelly and pastille confectionery
- 32. how to follow work instructions and why it is important to do so
- 33. common sources of contamination during processing, how to avoid these and what might happen if this is not done
- 34. how to operate, regulate and shut down the relevant equipment
- 35. when it is necessary to seek assistance and how to seek it
- 36. how to follow the relevant process control procedures and why it is important to do so
- 37. what the limits of your own authority and competence are and why it is important to work within them
- 38. how to deal with items that can be re-cycled or re-worked
- 39. how to dispose of waste
- 40. how to make equipment ready for future use



Developed by	NSAFD
Version Number	2
Date Approved	January 2019
Indicative Review  Date	January 2023
Validity	Current
Status	Original
Originating Organisation	Improve
Original URN	IMPSC205K
Relevant Occupations	Plant and Machine Operatives; Process Operatives; Process, Plant and Machine Operatives; Manufacturing technologies
Suite	Sweet Confectionery
Keywords	Gum; jelly; pastille; sugar; finishing; wrapping; packing