

3245 Principles of salt and dough conditioners/improvers in bakery

SQA Unit Code

H3J1 04

Level 3

SCQF Level 6

SCQF Credit value 6

Unit Summary

This unit is about understanding salt and dough conditioners and improvers and their functionality in baking. Dough conditioners and improvers typically include; enzyme active soya flour, malt and malt flour, sprouted cereal flour, fungal and bacterial enzyme products, mineral salts, ascorbic acid, emulsifiers, fats, yeast activators.

You need to understand the structure and functionality of salt to bakery products. You need to know how dough conditioners/improvers function in the bakery process. You also need to know the limitations and regulations which affect the use of dough conditioners/improvers.

This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of salt and dough conditioners/improvers to support your role.

In order to be assessed as competent you must demonstrate to your assessor that you can consistently perform to the requirements set out below. Your performance evidence must include at least one observation by your assessor.

Evidence of knowledge and understanding should be collected during observation of performance in the workplace. Where it cannot be collected by observing performance, other assessment methods should be used.

You need to know and understand:

1. the structure and composition of salt
2. the physical and chemical properties of salt
3. the role and functionality of salt in dough processing, especially fermentation, and products
4. the role and functionality of salt in dough processing and products
5. what the objectives of dough conditioners/improvers are; dough processing performance, volume, softness, crustiness, flavour
6. what the difference is between use of dough conditioners/improvers by millers and use by bakers
7. the use and advantages of dough conditioners/improvers as convenience pre-mixes of minor bread ingredients
8. the role and chemical action of enzyme active soya flour and other similar flour based additives in dough conditioners/improvers

9. the role and chemical action of fungal and bacterial enzyme products in dough conditioners/improvers
10. the action of different alpha and beta amylases on starch and the bread properties which result
11. the role and chemical action of Oxidants and Reducing agents in dough conditioners/improvers
12. how oxidants have a beneficial effect on proteins in dough development
13. the role and chemical action of emulsifiers in dough conditioners/improvers
14. the role and chemical action of fats in dough conditioners/improvers
15. the role and chemical action of yeast nutrients and fermentation aids in dough conditioners/improvers
16. the role of mould and rope inhibitors in dough conditioners/improvers when included
17. composition of dough conditioners/improvers for specific dough processes; Mechanical dough development (CBP), Activated dough development (ADD), Bulk fermentation
18. the legal constraints within which dough conditioners/improvers are formulated
19. the permitted ingredients in addition to flour, yeast and water allowed in white bread

Evidence of performance may employ examples of the following assessment:

- observation
- written and oral questioning;
- evidence from company systems (e.g. Food Safety Management System)
- reviewing the outcomes of work
- checking any records of documents completed
- checking accounts of work that the candidate or others have written