Overview

This standard is about understanding dough fermentation and how this is important in controlling the processing of doughs, in both non-automated and automated bakery production environments. Fermented dough typically include bread, roll and stick dough, plain and fruited bun dough, doughnuts, base dough for Danish and Croissant.

You need to understand the role of yeast and the principles of the fermentation process in dough. You need to know the basic structure of dough and how processing affects gas production and retention rates. You also need to know, how the control of fermentation during processing of dough determines the shape and quality of the eventual product.
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Principles of dough fermentation and process control

Performance criteria

You must be able to:

See

IMPCB105S Hand divide, mould and shape fermented dough
IMPCB109S Tin and tray up dough products
IMPCB110S Retard and prove dough products
You need to know and understand:

K1 the cell structure and properties of yeast as a living organism
K2 the feeding, growth and multiplication of yeast cells
K3 the principles of fermentation in dough; the role and action of enzymes, carbon dioxide gas and alcohol production
K4 the factors affecting fermentation rate; temperature, sugar, salt, pH, nitrogen, fats, spices, mould and rope inhibitors
K5 what happens if dough fermentation is allowed to progress without processing controls
K6 how the rate of dough fermentation is controlled in dough by temperature and humidity controlled processing environments
K7 the structure of dough, its capacity to form gas cells and trap gas bubbles and changes that occur during moulding, shaping, resting, retarding and proving that are critical to successful dough fermentation and development
K8 the function of key ingredients in dough making which can influence dough fermentation rates
K9 the gas production and retention properties of long process dough processing methods; bulk fermentation process (BFP), sponge and dough process
K10 the gas production and retention properties of short process dough processing methods; mechanical dough development in the Chorleywood Bread Process (CBP), activated dough development (ADD), no-time dough process
K11 how to maintain dough condition and deal with fermentation time constraints
K12 how to recognise dough fermentation problems which do not comply with specification
K13 how to resolve dough fermentation problems during processing
K14 what happens to the products of fermentation during baking
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