

1. Record Nr.	UNINA9910145810303321
Autore	Cauvain Stanley P
Titolo	Bakery food manufacture and quality [[electronic resource]] : water control and effects / / Stanley P. Cauvain and Linda S. Young
Pubbl/distr/stampa	Chichester, West Sussex ; ; Ames, Iowa, : Wiley-Blackwell, 2008
ISBN	1-282-01085-9 9786612010859 1-4443-0108-X 1-4443-0109-8
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (304 p.)
Altri autori (Persone)	YoungLinda S
Disciplina	641.815 664.752
Soggetti	Baked products Baking - Quality control Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Bakery Food Manufacture and Quality Water Control and Effects; Contents; Preface to the second edition; Preface to the first edition; 1 Water and Its Roles in Baked Products; Introduction; The composition and heat-related properties of water; Vapour pressure and relative humidity; Water hardness; Ionisation and solutions; The solubility of solids and their recrystallisation; Water of crystallisation; Vapour pressure of solutions; Osmotic pressure; Gases in a solution; Suspensions; Colloidal suspensions; Hydration; Water as a plasticiser; Surface tension and capillary action Gels and emulsionsWater in bakery ingredients; Using water as a processing tool; Assessing water in baked products; Conclusions; References; 2 The Role of Water in the Formation and Processing of Bread Doughs; Introduction; Wheat flour properties; The formation of bread doughs; Optimum bread dough water levels; Wheat flour water absorption capacity and its determination; Water levels in rye bread doughs; Pre-hydration of flour, wheat and other grains in the manufacture of bread and fermented products; Water in brews and

sponges; Water and dough development

The effects of dough ingredients on water levels in bread doughs; Dried gluten; Salt; Sugars; Enzymes; Non-wheat fibres; Other ingredients; Other factors affecting the level of water added to doughs; Dough and water temperatures; Water, dough rheology and moulding;

Conclusions; References; 3 The Role of Water in the Formation and

Processing of Batters, Biscuit and Cookie Doughs, and Pastes;

Introduction; The formation of cake batters; Dissolution and hydration

of ingredients in cake batters; Water levels in cake batters; Water-

containing ingredients and their contribution to cake batters

Flour properties and water levels in cake batters; Gases in cake batters;

Wafer and other batters; Control of batter temperatures; Batter viscosity

and its measurement; Formation and processing of biscuit and cookie

doughs; The control of temperature in the manufacture of biscuit and

cookie doughs; Formation and processing of short pastry doughs;

Formation and processing of laminated doughs; The impact of

ingredients on the water level in the formation of biscuit and cookie

doughs and pastes; Biscuit dough and paste rheological properties;

Compression-extrusion tests; Recording dough mixers

Load-extension tests; Fundamental tests; Choux pastries; Bakery

products not based on flour; Baked products; Fillings; Toppings and

icings; Marshmallow; Jams and jellies; Conclusions; References; 4 The

Contribution of Water During Processing, Baking, Cooling and Freezing;

Introduction; Water in retarded unbaked doughs; The influence of

moisture on white spot formation during the retarding of fermented

doughs; The importance of relative humidity during proof of fermented

doughs; The contribution of water (steam) to expansion and product

structure during baking; Bread and fermented products

Cakes

Sommario/riassunto

Water is the major contributor to the eating and keeping qualities and structure of baked products. Its management and control during preparation, processing, baking, cooling and storage is essential for the optimisation of product quality. This successful and highly practical volume describes in detail the role and control of water in the formation of cake batters, bread, pastry and biscuit doughs, their subsequent processing and the baked product. Now in a fully revised and updated second edition, the book has been expanded and developed through the inclusion of new information and references.