

1. Record Nr.	UNINA9910830816303321
Autore	Boulton Chris
Titolo	Brewing yeast and fermentation [[electronic resource] /] / Chris Boulton and David Quain
Pubbl/distr/stampa	Oxford [England] ; ; Malden, MA, : Blackwell Science Ames, Iowa, : [Distributed by] Iowa State University Press, 2001
ISBN	1-281-31277-0 9786611312770 0-470-99941-1 0-470-99940-3
Descrizione fisica	1 online resource (660 p.)
Altri autori (Persone)	QuainDavid
Disciplina	663.33 663.42 663/.42
Soggetti	Yeast Brewing Llevats Elaboració de cervesa Llibres electrònics
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 (p. 586-637) and index.
Nota di contenuto	Brewing Yeast and Fermentation; Contents; Preface; Acknowledgements; 1 Beer and brewing; 1.1 Introduction; 1.2 Historical perspective; 1.3 Current developments; 1.4 Legislation; 2 The brewing process; 2.1 Overview; 2.2 Beer types; 2.2.1 Beverages related to beer; 2.2.1.1 Sake; 2.2.1.2 Sorghum beer; 2.3 The brewing process; 2.3.1 Malting; 2.3.2 Adjuncts; 2.3.3 Brewing water; 2.3.4 Hops; 2.3.5 Production of sweet wort; 2.3.6 Wort boiling; 2.3.7 Fermentation and post-fermentation processes; 2.4 Wort composition; 2.4.1 Carbohydrates; 2.4.2 Nitrogenous components; 2.4.3 Polyphenols; 2.4.4 Lipids; 2.4.5 Sulphur compounds; 2.4.6 Minerals; 2.4.7 Miscellaneous; 2.5 High-gravity brewing; 2.6 Glossary of brewing terms; 3 The

biochemistry of fermentation; 3.1 Overview; 3.2 Mass balance; 3.3 Assimilation of wort nutrients; 3.3.1 Sugar uptake; 3.3.2 Uptake of wort nitrogenous components; 3.3.3 Uptake of lipids; 3.3.4 Metal ion uptake; 3.4 Carbohydrate dissimilation; 3.4.1 Carbon catabolite repression; 3.4.2 Storage carbohydrates; 3.4.2.1 Glycogen; 3.4.2.2 Trehalose; 3.4.3 Fermentable growth medium induced pathway; 3.5 Requirement for oxygen; 3.5.1 Synthesis of sterols and unsaturated fatty acids
 3.6 Ethanol tolerance
 3.6.1 Ethanol formation during fermentation; 3.6.2 Ethanol toxicity; 3.7 Formation of flavour compounds; 3.7.1 Organic and fatty acids; 3.7.2 Higher alcohols; 3.7.3 Esters; 3.7.4 Carbonyls; 3.7.4.1 Vicinal diketones; 3.7.5 Sulphur compounds; 3.7.6 Shock excretion; 4 Brewing yeast; 4.1 Morphology, cytology and cellular function; 4.1.1 Cell morphology; 4.1.1.1 Cell composition; 4.1.2 Cytology; 4.1.2.1 Plasma membrane; 4.1.2.2 Periplasm; 4.1.2.3 Mitochondria; 4.1.2.4 Vacuoles; 4.1.2.5 Other cytoplasmic inclusions; 4.1.3 Intracellular location of enzymes
 4.2 Taxonomy and differentiation
 4.2.1 Taxonomy of the Saccharomyces; 4.2.1.1 Identification of yeasts; 4.2.2 Taxonomy of ale and lager yeasts; 4.2.3 Diversity and differences between ale and lager yeasts; 4.2.3.1 Culture collections of brewing yeasts; 4.2.4 Differentiation - an introduction; 4.2.5 `Traditional' methods; 4.2.5.1 Plate tests; 4.2.5.2 Flocculation tests; 4.2.5.3 Fermentation performance; 4.2.5.4 Assimilation/fermentation; 4.2.5.5 Immunology; 4.2.5.6 Other approaches; 4.2.6 `Modern' methods; 4.2.6.1 Genetic fingerprinting - RFLP; 4.2.6.2 Genetic fingerprinting - PCR
 4.2.6.3 Genetic fingerprinting - karyotyping
 4.2.6.4 Genetic fingerprinting - AFLP; 4.2.6.5 Pyrolysis mass spectroscopy; 4.2.6.6 Other approaches; 4.3 Genetics - genome, cell cycle and modification; 4.3.1 Introduction; 4.3.1.1 Genetic nomenclature and definitions; 4.3.2 The genome; 4.3.2.1 Yeast genome project; 4.3.2.2 Yeast genome project, human disease and pathogenicity; 4.3.2.3 Yeast genome project and brewing yeast; 4.3.2.4 Chromosome number; 4.3.2.5 Ploidy; 4.3.2.6 Chromosomal instability; 4.3.2.7 Mitochondrial instability; 4.3.3 Cell cycle; 4.3.3.1 Cell division
 4.3.3.2 Cell division and brewery fermentation

Sommario/riassunto

Now Available for the First Time in Paperback! This unique volume provides a definitive overview of modern and traditional brewing fermentation. Written by two experts with unrivalled experience from years with a leading international brewer, coverage includes all aspects of brewing fermentation together with the biochemistry, physiology and genetics of brewers' yeast. Brewing Yeast and Fermentation is unique in that brewing fermentation and yeast biotechnology are covered in detail from a commercial perspective. Now available for the first time in paperback, the book is