

Librería
Bonilla y Asociados
desde 1950



Título: Technology Of Functional Cereal Products

Autor: Hamaker, Bruce R.

Precio: \$3780.00

Editorial:

Año: 2008

Tema:

Edición: 1ª

Sinopsis

ISBN: 9781420066739

This important collection reviews technologies for producing a wide range of cereal products with different health-promoting properties and more acceptable sensory quality. Part I discusses the health effects of cereals, with chapters on topics such as whole grain foods, cereal micronutrients and resistant starch. Consumer perception of health-promoting cereal products and regulatory and labelling issues are also described. Part II focuses on technologies to improve the quality of functional cereal products, reviewing issues such as grain improvement, novel cereal-derived ingredients and formulation of low GI products. Chapters dedicated to a wide range of product types are also included, covering cereal foods made from oats, rye, barley and speciality grains and breads fortified with vitamins and minerals, soy and omega-3 lipids among others.

Contents.

PART 1 INTRODUCTORY ISSUES

Consumers and functional cereal products

M Dean, M M Raats and R Shepherd, University of Surrey, UK

- Why is it important to understand consumer perceptions? Consumption of grain-based foods
- Perceived barriers to eating wholegrain products
- Interventions to increase intake of grain-based foods
- Functional cereal products
- Consumer perceptions of functional grain products
- Future trends
- Acknowledgements
- References

Labeling and regulatory issues related to functional cereal products

K Schmitz, L Marquart, University of Minnesota, USA and J Willem van der Kamp, TNO Quality of Life, The Netherlands

- Introduction

Teléfonos: 55 44 73 40 y 55 44 72 91

www.libreriabonilla.com.mx

Librería
Bonilla y Asociados
desde 1950



- Regulation and labelling of functional cereal products from CODEX
- Regulation and labelling of functional cereal products in the European Union
- Regulation and labeling of functional cereal products in the USA
- Whole grain definitions and health claims - current and emerging issues
- Future Trends
- Sources of further information and advice
- References

Fiber, whole grains and disease prevention

J Miller Jones, The College of St. Catherine, USA

- Introduction
- Fiber, whole grains and obesity
- Fiber, whole grains and cardiovascular disease
- Fiber, whole grains, and the colon and digestive tract
- Fiber and whole grains and all cause mortality
- Summary
- References

Resistant starch and health

A M Birkett, National Starch Food Innovation, USA and I L Brown, University of Wollongong, Australia

- Introduction
- Health effects of resistant starch
- Resistant starch for food development
- Conclusions
- References

Micronutrients in cereal products: their bioactivities and effects on health

A Kamal-Eldin, Swedish University of Agricultural Sciences, Sweden

- Introduction
- Health effects of naturally occurring micronutrients in cereal products
- Minerals and mineral bioavailability
- Vitamins and vitamin bioavailability
- Bioactive phytochemicals other than vitamins
- Micronutrients added to cereal products and their health effects
- Future trends
- Sources of further information and advice

Librería
Bonilla y Asociados
desde 1950



- References

Whole-grain consumption and insulin sensitivity
M A Pereira, University of Minnesota, USA

- Introduction
- The global burden of insulin resistance
- Potential mechanisms
- Observational evidence / cross-sectional and prospective epidemiologic studies
- Experimental evidence - clinical investigations and controlled trials
- Summary and future trends
- Sources of information and advice
- References

Determining the functional properties of food components in the gastrointestinal tract
M Champ, INRA, France

- Introduction
- Functional properties of food components in the gastrointestinal tract
- In vitro and in vivo methods to determine the functional properties (in the GI tract) of food components
- In vitro gut models
- In vitro evaluation of the bio-availability of nutrients of food components
- In vitro evaluation of the fermentability of nutrients of food components
- In vivo evaluation, in animal models, of the bio-availability of nutrients of food components
- In vivo evaluation, in human volunteers, of the bio-availability of nutrients properties of food components
- In vivo evaluation, in human volunteers and animal models, of the fermentability of nutrients, functional properties and/or benefits/risks of food components
- In vivo evaluation of satiety and satiation induced by a food component
- In vitro and in vivo evaluation of antioxidants bio-availability and properties of food component
- Future trends
- Sources of further information and advice
- References

PART 2 TECHNOLOGY OF FUNCTIONAL CEREAL PRODUCTS

Improving the nutritional quality of cereals by conventional and novel approaches
P R Shewry, Rothamsted Research, UK

- Introduction

Librería
Bonilla y Asociados
desde 1950



- Technologies for grain improvement
- Improvement of protein quality
- Developing resistant starch
- Improving dietary fibre composition
- Increasing vitamins and minerals
- Future trends
- Sources of further information and advice
- References

Novel high fibre and whole grain breads

C Collar, Consejo Superior de Investigaciones Científicas, Spain

- Introduction
- Whole grains, refined grains, and high fibre fortified refined grains to make bread
- Health benefits of high fibre and whole grain white breads: protective nature in the diet
- Novel high fibre and whole grain breads
- Consumer attitude towards high fibre breads and whole grain white breads
- Particular difficulties in the development of high fibre and whole grain white breads: effects of formulation and processing technology
- Future trends
- Sources of further information and advice
- References

Oat bread and other oat products

A Kaukovirta-Norja and P Lehtinen, VTT, Finland

- Introduction: oats as a food raw-material
- Basics on oat
- The range of oat food products
- Bioactive compounds and health benefits of oat and oat products
- Challenges in the development of functional oat products
- Future trends
- References

Rye bread and other rye products

A Kamal-Eldin, P. Åman, Swedish University of Agricultural Sciences, Sweden, J-X Zhang, University of Umeå, Sweden, K-E Bach nudsen, Danish Institute of Agricultural Sciences, Denmark and K Poutanen, University of Kuopio, Finland

- Introduction

Librería
Bonilla y Asociados
desde 1950



- Chemistry and properties of rye grain nutrients and bioactive compounds
- Process technologies and rye food products
- Health effects of dietary fiber
- Bioavailability and health effects of bioactive phenolic compounds in rye
- Health benefits of rye bread and other rye products
- Alkylresorcinols as biomarkers of rye intake
- Future trends
- Sources of further information and advice
- References

Functional barley products

A Andersson and P Åman, Swedish University of Agricultural Sciences, Sweden

- Introduction
- The range of barley products
- Health benefits of barley
- Particular difficulties in the development of functional barley products
- Manufacturing technology
- Future trends
- References

Products containing other speciality grains: sorghum, the millets and pseudocereals

J R N Taylor and M N Emmambux, University of Pretoria, South Africa

- Introduction
- The grains
- Consumer attitudes
- Traditional food products and processing technologies
- Modern foods and processing technologies
- Conclusions
- Sources of further information and advice
- References

Vitamin and mineral fortification of bread

C M Rosell, Instituto de Agroquímica y Tecnología de Alimentos (IATA-CSIC), Spain

- Introduction: vitamin and mineral fortification of bread
- Range of vitamins and minerals added to bread and the health benefits
- Consumer attitude towards fortified bread
- Particular difficulties in the development of vitamin and mineral fortified breads

Librería
Bonilla y Asociados
desde 1950



- Development and manufacturing technology of vitamin and mineral fortified breads
- Fortification drawbacks
- Future trends
- Sources of further information and advice
- References

Omega 3 enriched bread

C Hall III and M C Tulbek, North Dakota State University, USA

- Introduction
- Sources and Health Benefits of Omega-3 Lipids
- Consumer awareness, potential market, products and claims
- Development and manufacturing technology
- Future Trends
- References

Soy-enriched bread

Y Vodovotz, The Ohio State University, USA

- Introduction
- Physico-chemical properties of soy-enriched bread
- Effect of soy addition on staling (firming) of bread
- Health Benefits of soy-enriched bread
- Future trends
- References

Inulin in bread and other cereal-based products

D Meyer, Sensus, The Netherlands and J de Wolf, Cosun Food Technology Centre, The Netherlands

- Introduction: trends in food consumption and product development
- Inulin: structure, occurrence and general properties
- Trends in bread consumption
- Development of inulin enriched bread
- Inulin in product development of other cereal-based products
- Nutrition and health claims on inulin containing cereal products
- References

High-fibre pasta products

C S Brennan, Massey University, New Zealand

Librería
Bonilla y Asociados
desde 1950



- Introduction
- Pasta origins and importance as a food commodity
- Typical composition of pasta and noodles
- Pasta and Glycaemic Index
- The influence of pasta processing on pasta structure
- Dietary fibre enrichment of pasta
- Future trends
- Summary
- References

Functional cereal products for those with gluten intolerance

E K Arendt and F Dal Bello, National University of Ireland, Ireland

- Introduction
- Difficulties in producing gluten-free breads
- Ingredients suitable for gluten-free bread production
- Improving the quality of gluten-free bread
- Future trends
- Conclusions
- References

Converting oats to high-fibre products for use in functional foods

G E Inglett and D G Stevenson, U.S. Department of Agriculture, USA and S Lee, Sejong University, Republic of Korea

- Introduction: Health benefits of functional high-fibre oat products
- Isolating and concentrating oat beta-glucans using solvent extraction methods
- Isolating and concentrating oat beta-glucans using milling methods
- Isolating and concentrating oat beta-glucans using alkaline and acidic extractions
- Isolating and concentrating oat beta-glucans using thermal and frozen extraction methods
- Isolating and concentrating oat beta-glucans using biotechnological enzymatic methods
- Application of high value functional high-fibre oat products in functional foods
- Future trends
- References

Improving the use of dietary fibre and other functional ingredients to lower the GI of cereal products

S K Patil, S K Patil and Associates, USA

- Introduction

Librería
Bonilla y Asociados
desde 1950



- Glycemic Index (GI) and Glycemic Load
- Carbohydrate digestibility
- Dietary fiber and GI
- Ingredients for low GI foods
- Effects of processing on the properties of dietary fiber ingredients and formulation challenge
- Summary
- References

Methods to slow starch digestion rate in functional cereal products

G Zhang, M Venkatachalam and B R Hamaker, Purdue University, USA

- Introduction
- Slowly digestible and resistant characteristics of raw starches
- Starch structural modification
- Influence of other food components on starch digestion rate
- Slowly digestible starch and low glycemic index cereal foods: future trends
- References