

SpringerBriefs in Food, Health, and Nutrition

Editor-in-Chief

Richard W. Hartel

University of Wisconsin – Madison, USA

Associate Editors

J. Peter Clark, *Consultant to the Process Industries, USA*

John W. Finley, *Louisiana State University, USA*

David Rodriguez-Lazaro, *ITACyL, Spain*

Yrjo Roos, *University College Cork, Ireland*

David Topping, *CSIRO, Australia*

Springer Briefs in Food, Health, and Nutrition present concise summaries of cutting edge research and practical applications across a wide range of topics related to the field of food science, including its impact and relationship to health and nutrition. Subjects include:

- Food chemistry, including analytical methods; ingredient functionality; physic-chemical aspects; thermodynamics
- Food microbiology, including food safety; fermentation; foodborne pathogens; detection methods
- Food process engineering, including unit operations; mass transfer; heating, chilling and freezing; thermal and non-thermal processing, new technologies
- Food physics, including material science; rheology, chewing/mastication
- Food policy
- And applications to:
 - Sensory science
 - Packaging
 - Food quality
 - Product development

We are especially interested in how these areas impact or are related to health and nutrition.

Featuring compact volumes of 50 to 125 pages, the series covers a range of content from professional to academic. Typical topics might include:

- A timely report of state-of-the art analytical techniques
- A bridge between new research results, as published in journal articles, and a contextual literature review
- A snapshot of a hot or emerging topic
- An in-depth case study
- A presentation of core concepts that students must understand in order to make independent contributions

For further volumes:

<http://www.springer.com/series/10203>

Roselina Karim • Muhammad Tauseef Sultan

Yellow Alkaline Noodles

Processing Technology and Quality
Improvement

 Springer

Roselina Karim
Department of Food Technology, Faculty
of Food Science and Technology,
Universiti Putra Malaysia
Serdang, Selangor
Malaysia

Muhammad Tauseef Sultan
Department of Food Technology, Faculty
of Food Science and Technology,
Universiti Putra Malaysia
Serdang, Selangor
Malaysia

ISSN 2197-571X

ISSN 2197-5728 (electronic)

SpringerBriefs in Food, Health, and Nutrition

ISBN 978-3-319-12864-1

ISBN 978-3-319-12865-8 (eBook)

DOI 10.1007/978-3-319-12865-8

Springer Cham Heidelberg New York Dordrecht London

© The Authors 2015

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

Noodles are amongst the oldest forms of processed food consumed and are considered to be important component of human diets especially for the communities living in South East Asia e.g. China, Japan, Indonesia, Malaysia, Thailand, etc. In recent years, noodles have also become popular in other parts of the world and their consumption is increasing with each passing day in some developing economies. The noodles are of various types and wide range of differences exists between communities living in different countries. In general, we can classify them based on origin i.e. Chinese, Japanese, and Thai bamee. They can also be categorized into white and yellow noodles based on their color. Similarly, they can also be classified based on flour type e.g. wheat and rice noodles. The variations in processing techniques also results in sub-classification of noodles into four types i.e. fresh, semi-boiled, dried, boiled, and steamed noodles. Amongst these all types, yellow alkaline noodles are of considerable importance owing to their brightness and yellow color tone. They are famous in South East Asia and now taking share in other parts of the globe too. Noodles and pasta are related products and both of them can be served in the same way. According to the best of authors knowledge, the literature regarding yellow alkaline noodles has not been compiled in the form of book/brief and knowledge is disintegrated that needs to be combined together to bring maximum information at one point. This Springer-brief is an attempt to clarify several issues related to yellow alkaline noodles e.g. classification, ingredients and their role, processing technology, factors affecting the quality of noodles, improving nutritional values, and indeed discussing the modern concepts and innovations. The noodles are of many types and sometime pasta and other products are also placed in the same category. However, there are some differences too that are highlighted in the first proposed heading of this Springer-brief i.e. Introduction and background. A detailed discussion (second heading) regarding noodle classification based on various characteristics is limelight of this Springer-brief. **In the third heading of the proposed brief**, the authors briefed the readers about the yellow alkaline noodles. **In the fourth heading**, the quality criteria have been discussed for each raw material. **In the fifth heading**, the detailed manufacturing has been discussed. **In the 6th & 7th headings**, the discussion has been made regarding the factors affecting the quality of the yellow alkaline noodles along with measure to improve the nutritional

value and quality. **In the last heading**, discussion has been made with reference to the modern trends and innovations to brief the readers about the recent developments and future prospects with special reference to preservation. The authors has also mention future prospects and areas of research, thus stakeholders could divert their attention to solve those problems. As we mentioned earlier, there is no book/brief available on this topic thus there is need to present all the details in comprehensive and lucid manner in one Springer-brief. I hope that the present springer brief would be interesting for the readers and allied stakeholders.

Dr. Roselina Karim

Contents

1	Background and Introduction	1
2	Types of Noodles: A Brief Description	5
3	Yellow Alkaline Noodles: An Introduction	7
4	Raw Materials and Their Quality	9
4.1	Wheat Flour	9
4.2	Water	12
4.3	Alkaline Salts	13
4.4	Sodium Chloride	14
4.5	Functional Ingredients	15
5	Processing Technology	17
6	Factor Affecting Quality of Yellow Alkaline Noodles	19
7	Improving the Nutritional Value and Quality	25
8	Modern Trends and Innovation	31
	Conclusion	35
	References	37