
EVAPORATIVE COOLERS FOR THE POSTHARVEST MANAGEMENT OF FRUITS AND VEGETABLES

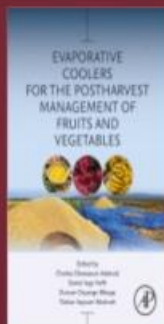


Edited by
Charles Oluwaseun Adetunji
Daniel Ingo Hoff
Duncan Onyango Mbugu
Tilahun Seyoum Workneh



Evaporative Coolers for the Postharvest Management of Fruits and Vegetables

Book • 2023



Edited by:
Charles Oluwaseun Adetunji, Daniel Ingo Hefft,
... Tilahun Seyoum Workneh

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Table of contents

Cover

Title page

Table of Contents

Copyright

Contributors

Preface



Book chapter ☐ Abstract only

Chapter One - Key contributors to postharvest losses and the scale of the problem

Nyejirime Young Wike, Olugbemi Tope Olaniyan, ... Frank Abimbola Ogundolie

Pages 1-15



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Chapter Two - Influence of geographical and climatic factors on the performance of evaporative coolers for the storage of postharvest produce

Charles Oluwaseun Adetunji, Nyejirime Young Wike, ... Babatunde Oluwafemi Adetuyi

Pages 17-27



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Chapter Three - Influence of evaporative coolant structures on the postharvest attributes of climacteric fruits

Getachew Neme Tolesa, Mawardi Yusufe Ademe and Tilahun Seyoum Workneh

Pages 29-40



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Chapter Four - Effect of evaporative cooling on the attributes of nonclimacteric fruits

Nyejirime Young Wike, Charles Oluwaseun Adetunji, ... Wadzani Palnam Dauda

Pages 41-51



Book chapter ☐ Abstract only

Chapter Five - Effectiveness of evaporative cooling to extend shelf life of fruits and vegetables

Jane Ambuko, Duncan Onyango Mbuga and Emmanuel Amwoka

Pages 53-59



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View chapter



Book chapter ☐ Abstract only

Chapter Six - Application of edible coatings in porous evaporative cooling

Nyejirime Young Wike, Olugbemi Tope Olaniyan, ... Wadzani Palnam Dauda

Pages 61-78



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Chapter Seven - Recent advances in evaporative cooling applications in fruits and vegetables for short-term cooling at the postharvest stage

Nyejirime Young Wike, Charles Oluwaseun Adetunji, ... Oaihimire Idemudia Edetalehn

Pages 79-86



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Chapter Eight - Health benefits derived from fruits and vegetables stored using evaporative coolers

Charles Oluwaseun Adetunji, Nyejirime Young Wike, ... Wadzani Palnam Dauda

Pages 87-100



Book chapter ☐ Abstract only

Chapter Nine - Postharvest management of aflatoxins in fruits and vegetables

Olorunsola I. Adeyomoye, Charles Oluwaseun Adetunji, ... Frank Abimbola Ogundolie

Pages 101-115



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View abstract



View chapter



Book chapter ☐ Abstract only

Chapter Ten - Synergetic effect of edible coatings from natural materials on the shelf-life extension of fruits and vegetables

Nyejirime Young Wike, Charles O. Adetunji, ... Frank Abimbola Ogundolie

Pages 117-132



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View chapter



Book chapter ☐ Abstract only

Chapter Eleven - Effect of evaporative coolant structure on chemical, biochemical, and physiological changes in fruits and vegetables

Nyejirime Young Wike, Olugbemi T. Olaniyan, ... Wadzani Palnam Dauda

Pages 133-153



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View chapter



Book chapter ☐ Abstract only

Chapter Twelve - Effect of evaporative cooling structures on the sensory attributes of fruits and vegetables and consumer acceptability

Dare Ayobami, Charles Oluwaseun Adetunji, ... Wadzani Palnam Dauda

Pages 155-170



Book chapter ☐ Abstract only

Chapter Thirteen - Effectiveness of evaporative coolant structures in reducing spoilage microorganisms

Charles Oluwaseun Adetunji, Olugbemi T. Olaniyan, ... Wadzani Palnam Dauda

Pages 171-184



Purchase

View abstract



View chapter



Book chapter ☐ Abstract only

Chapter Fourteen - Farmers' awareness of edible coatings and other dissemination measures

Wadzani Palnam Dauda, Ishaku James Dantata, ... Frank Abimbola Ogundolie

Pages 185-207



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View abstract



View chapter



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Chapter Fifteen - The effect of evaporative coolant structure on ornamental plants

Wadzani Palnam Dauda, Ishaku James Dantata, ... Frank Abimbola Ogundolie

Pages 209-235



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View chapter



Book chapter ☐ Abstract only

Chapter Sixteen - Effect of evaporative cooling structures on tropical and subtropical fruits and nuts

Olorunsola I. Adeyomoye, Olugbemi Tope Olaniyan, ... Wadzani Palnam Dauda

Pages 237-247



Book chapter ☐ Abstract only

Chapter Seventeen - Effect of an evaporative cooling structure as a storage technique in the preservation of fresh produce/horticulture to benefit human health

Mayowa J. Adeniyi, Charles Oluwaseun Adetunji, ... Wadzani Palnam Dauda

Pages 249-272



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View chapter



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Chapter Eighteen - Effect of evaporative coolant structure on roots and tubers

Charles Oluwaseun Adetunji, Nyejirime Young Wike, ... Frank Abimbola Ogundolie

Pages 273-286



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View abstract

View chapter



Book chapter ☐ Abstract only

Chapter Nineteen - Evaporative coolers for the postharvest management of fruits and vegetables

Abel Inobeme, Charles Oluwaseun Adetunji, ... Wadzani Palnam Dauda

Pages 287-291



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View chapter



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Chapter Twenty - Application of essential oils as edible coatings: Implications of storage in evaporating coolant structure

Mayowa J. Adeniyi, Nyejirime Young Wike, ... Frank Abimbola Ogundolie

Pages 293-312



Book chapter ☐ Abstract only

Chapter Twenty-One - Chitosan as an edible coating on fruits stored in evaporative cooling structures

Abel Inobeme, Charles Oluwaseun Adetunji, ... Wadzani Palnam Dauda

Pages 313-322



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View chapter



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Chapter Twenty-Two - Intelligent freshness indicators in packaging of plant-based food products

Frank Abimbola Ogundolie, Charles Oluwaseun Adetunji, ... Babatunde Oluwafemi Adetuyi

Pages 323-331



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View chapter



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Chapter Twenty-Three - Influence of evaporative cooling, refrigeration, and traditional underground storage methods on the physicochemical properties of *amadumbe* starch

Demian Mukansi and Tilahun Seyoum Workneh

Pages 333-360



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View abstract

View chapter



Book chapter ○ Abstract only

Chapter Twenty-Four - Physicochemical properties of *amadumbe* flour derived from *amadumbe* corms subjected to different storage methods

Demian Mukansi and Tilahun Seyoum Workneh

Pages 361-393



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Chapter Twenty-Five - Biogenic nanomaterials with diverse biological activities in the food and biomedical industries

Charles Oluwaseun Adetunji, Chukwuebuka Egbuna, ... Babatunde Oluwafemi Adetuyi

Pages 395-420



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Chapter Twenty-Six - Patenting protocols, toxicity, risk assessments, and policy issues of nanomaterials with diverse applications in food, biomedical, and other relevant sectors

Charles Oluwaseun Adetunji, Frank Abimbola Ogundolie, ... Oaihimire Idemudia Edetalehn

Pages 421-446



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About the book

Description

Evaporative Coolers for the Postharvest Management of Fruits and Vegetables covers world demand for food of high quality without chemical preservatives and with extended shelf life. The book provides the practical application of evaporative coolers, with a strong focus on postharvest management and fruit/vegetable science as high moisture foods are highly perishable. Special emphasis is laid on the impact of the evaporative coolant structure on the nutritional and food safety content of fresh produce. Moreover, the book covers the effect of evaporative coolant structure towards the reduction of spoilage microorganisms responsible for the spoilage of post-harvest losses of various fruits and vegetables.

Edited by a team of specialists, this title also helps people dealing with microbiology understand how this simple technology can help improve product quality for communities that currently lack access to cooling or have unreliable power supplies.

Key Features

- Thoroughly explores shelf-life extensions that can be achieved when applying evaporative cooling
- Covers postharvest management through evaporative cooling
- Brings food and consumer science aspects from evaporative cooled fruits and vegetables
- Presents information on the interaction of edible coatings towards the extension of climacteric and non-climacteric fruits

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Editors

Charles Oluwaseun Adetunji

Applied Microbiology, Biotechnology and Nanotechnology Laboratory, Department of Microbiology, Edo University Iyamho, Auchi, Edo State, Nigeria

Applied Microbiology, Biotechnology and Nanotechnology Laboratory, Department of Microbiology, Edo State University Uzairue, Iyamho, Edo State, Nigeria

Duncan Onyango Mbugue

Department of Environmental and Biosystems Engineering, University of Nairobi, Nairobi, Kenya

Daniel Ingo Hefft

Campden BRI, Chipping Campden, United Kingdom

School of Chemical Engineering, University of Birmingham, Birmingham, United Kingdom

Tilahun Seyoum Workneh

Bioresources Engineering, School of Engineering, University of KwaZulu-Natal, Pietermaritzburg, Scottsville, South Africa



Chapter Twenty-Five - Biogenic nanomaterials with diverse biological activities in the food and biomedical industries

Charles Oluwaseun Adetunji^a, Chukwuebuka Egbuna^{q r}, Abiodun Akeem Ajiboye^t,
Olulope Olufemi Ajayiⁱ, Wadzani Palnam Dauda^j, Shakira Ghazanfar^k,
Frank Abimbola Ogundolie^b, John Tsado Mathew^c, Juliana Bunmi Adetunji^t, Abel Inobeme^{d w},
Olotu Titilayo^e, Olugbemi Tope Olaniyan^f, Oluwatosin Ademola Ijabadeniyi^g,
Abdullahi Tunde Aborode^{h l}, Anton Fikai^{m n}, Muhammad Akram^o, Ruth Ebunoluwa Bodunrinde^p,
Umme Laila^o, Oluwaseyi Paul Olaniyan^p, Olugbenga Samuel Micheal^s, Abdulmalik Aliyu^u,
Olaekan Akinbo^v, Babatunde Oluwafemi Adetuyi^x

- ^l Healthy Africans Platform, Research and Development, Endocrinology Unit, Edo University Iyamo, Ibadan, Nigeria
- ^m Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Bucharest, Romania
- ⁿ Associate Member of Academy of Romanian Scientists, Splaiul Independentei, Bucharest, Romania
- ^o Department of Eastern Medicine, Government College University, Faisalabad, Pakistan
- ^p Department of Microbiology, Federal University of Technology Akure, Ondo State, Nigeria
- ^q Department of Biochemistry, Faculty of Natural Sciences, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria
- ^r Nutritional Biochemistry and Toxicology Unit, World Bank Africa Centre of Excellence, Centre for Public Health and Toxicological Research (PUTOR), University of Port-Harcourt, Rivers State, Nigeria
- ^s Cardiometabolic Research Unit, Department of Physiology, College of Health Sciences, Bowen University, Iwo, Osun State, Nigeria
- ^t Department of Biochemistry, Osun State University, Osogbo, Nigeria
- ^u Department of Pharmaceutical Microbiology and Biotechnology, University of Ilorin, Ilorin, Nigeria
- ^v AUDA-NEPAD Centre of Excellence in Science, Technology, and Innovation, Directorate of Knowledge Management and Programme Evaluation, Stellenbosch, Western Cape, South Africa
- ^w Department of Chemistry, Edo State University Uzairue, Iyamho, Edo State, Nigeria
- ^x Biochemistry Unit, Department of Natural Sciences, Faculty of Pure and Applied Sciences, Precious Cornerstone University, Ibadan, Nigeria

Abstract

Several studies have revealed the sustainability of green metallic nanoparticles generated from microorganisms which might be linked to several factors such as environmentally friendly nature, low cost of production, stability of the product, presence of biocompatible coatings, absence of harmful by-products, and rapid growth rate. Many of these green metallic nanoparticles have been reported to possess biological activities such as anticancer, antimicrobial, antiinflammatory, and antibacterial properties. This chapter thus sets out current advances in the application of nanobiotechnological and metabolic processes for effective designing synthesis of nanomaterials derived using biologically active metabolites from microorganisms and their modes of action. These nanomaterials could be an economical source of edible coatings in the food and biomedical industries.
