



Himjyoti Dutta  
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Editors

# Amylose

Properties, Structure and Functions

FOOD SCIENCE AND TECHNOLOGY

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# **AMYLOSE**

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**AMYLOSE**  
**PROPERTIES, STRUCTURE**  
**AND FUNCTIONS**

**HIMJYOTI DUTTA**  
**AND**  
**SANJIB KUMAR PAUL**  
**EDITORS**



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## PREFACE

Amylose is the linear polymeric fraction of starch which has its unique characteristics leading to its specific role in the application of starches and its own. Amylose forms a significant proportion of the macromolecular structure of starch. Written by a selected team of international authors, including academicians and researchers with special expertise on starch chemistry, technology and functions, the book *Amylose: Properties, Structure and Functions* is a unique approach to the multifaceted trends of amylose chemistry, properties, functionality and applications.

Under the collaborative editorial guidance of Dr. Himjyoti Dutta and Dr. Sanjib Kumar Paul, who are experienced in researches on starch, starch-based composite materials and other biomaterials, the book provides an overview of important scientific and technological approaches on amylose. Traditional and recent analytical methods for amylose purification and characterization have been thoroughly discussed in this book. The role of amylose in major starch sources suggesting specific usage in food and other complex edible and non-edible matrices have been covered. Recent findings on its unexpected properties, directing it to the ever growing world of functional biopolymers have been discussed. Amylose polymorphism and complex formation with non-starch components have been elaborated for optimum knowledge dissemination on its potential use as nano-scale material for food, drug, nutraceutical and pharmaceutical industries.

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Looking into the unavailability of an exclusive book on amylose and its various modern aspects, the editorial team, with the collaboration of authors throughout the globe, executed the idea of bringing a reference book on amylose in the name of *Amylose: Properties, Structure and Functions*. The editors emphasized to include all the present day aspects of amylose to address the need of students, researchers and industry experts in a global perspective. Wide coverage of informations with recent findings along-with short and long term consequences and future prospects, a novel attempt was made to make the book as an ideal reference book on amylose for the readers.