1. Record Nr. UNINA9910742490003321 Autore Sharanagat Vijay Singh Titolo Starch: Advances in Modifications, Technologies and Applications / / edited by Vijay Singh Sharanagat, Dharmesh Chandra Saxena, Kshitiz Kumar, Yogesh Kumar Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2023 3-031-35843-0 ISBN Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (486 pages) Altri autori (Persone) SaxenaDharmesh Chandra KumarKshitiz KumarYogesh Disciplina 664.2 Soggetti Food science Food - Analysis Chemistry Food Science Food Engineering Food Studies Food Analysis **Food Chemistry** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Starch: Current Production & consumption trends -- Modification of Starch -- Oxidation of starch -- Hydrolysis of Starch -- 1. Cross linking of starch -- Octenyl succinic anhydride Modification of starch -- Dry Heat Treatment of Starch -- Heat-moisture treatment of starch -- Annealing of Starch -- High Hydrostatic Pressure Treatment of Starch -- Ultrasonication of Starch -- Deep Freezing and Thawing Modification and its impact on starch properties -- Cold Plasma Treatment of starch -- Microwave Irradiation of Starch -- Gamma irradiation of Starch -- Enzymatic modification of starch --Fermentation Of Starch -- Effect of germination on starch. Sommario/riassunto Starch is one of the major components responsible for the structure of

final food products. A recent report by Industrial Starch Market predicts

the industrial starch market to reach about 106.64 billion by 2022. The major portion of the starch volume will be contributed by conventional sources like maize, wheat and potato. These native starch sources are well capable to meet the industrial requirements. However, modification of starch brings lot of positive changes in functional and structural properties of starch. As compared to their native counterparts, modified starches are gaining a significant market growth due to their enhanced functionalities and applications. Starch: Advances in Modifications, Technologies and Applications provides comprehensive coverage of the most recent advances in the modification techniques, their impact on functionality of starch and potential application food industries. Starch is a vital ingredient for food processing industries and it has been covered thoroughly in different books. However, none of the books currently on the market have covered the most recent advances in modification techniques and their derivatives including the functional, engineering, thermo-pasting, rheological, structural and morphological properties of starch. This text comprehensively covers almost all the starch modifications, reviewing the derivatives of modification techniques and compiling all the changes in properties to provide an understanding and perspective of these innovative applications. From the history of starch production to current chemical and physical modifications, this book offers researchers all the information they need on starch modifications in a single source.