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| Autore | Wrolstad Ronald E. <1939-> |
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| Soggetti | Carbohydrates |
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| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Machine generated contents note: 1. Structure and nomenclature of sugars and sugar derivatives.2. Sugar Composition.3. Reactions of sugars.4. Functional properties of sugars.5. Sugar analytical methods.6. Non-enzymic browning reactions.7. Starch.8. Cell-wall polysaccharides.9. Nutritional roles of carbohydrates Appendix - exercises and demonstrations. -- Recognition of hemiacetals, hemiketals, acetals and ketals. - - Making molecular models of sugars with molecular model kits. - - Calculation and specification of multiple chirality of sugar pyranoid ring structures. -- Plane-polarized light & optical activity.-- Sugar polarimetry & sucrose inversion.- -The Fehlings test for reducing and non-reducing sugars. - - Student-designed non-enzymic browning experiments. - - Microscopic examination of starch. - - The qualitative iodine test for starch. |
| Sommario/riassunto | "Not since "Sugar Chemistry" by Shallenberger and Birch (1975) has a text clearly presented and applied basic carbohydrate chemistry to the quality attributes and functional properties of foods. Now in Food Carbohydrate Chemistry, author Wrolstad emphasizes the application of carbohydrate chemistry to understanding the chemistry, physical and functional properties of food carbohydrates. Structure and nomenclature of sugars and sugar derivatives are covered, focusing on |

those derivatives that exist naturally in foods or are used as food additives. Chemical reactions emphasize those that have an impact on food quality and occur under processing and storage conditions. Coverage includes: how chemical and physical properties of sugars and polysaccharides affect the functional properties of foods; taste properties and non-enzymic browning reactions; the nutritional roles of carbohydrates from a food chemist's perspective; basic principles, advantages, and limitations of selected carbohydrate analytical methods. An appendix includes descriptions of proven laboratory exercises and demonstrations. Applications are emphasized, and anecdotal examples and case studies are presented. Laboratory units, homework exercises, and lecture demonstrations are included in the appendix. In addition to a complete list of cited references, a listing of key references is included with brief annotations describing their important features"--