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| Descrizione fisica      | 1 online resource (270 p.)  |
| Collana                 | World agriculture series  |
| Altri autori (Persone)  | ClarkeR. J (Ronald James)<br>VitzthumO. G   |
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| Soggetti                | Coffee<br>Coffee industry   |
| Lingua di pubblicazione | Inglese   |
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| Note generali           | Description based upon print version of record.   |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | COFFEE Recent Developments; Contents; Preface; List of Contributors; 1<br>Chemistry I: Non-volatile Compounds; 1A Carbohydrates; 1.1<br>Introduction; 1.2 Green coffee; 1.2.1 Low molecular weight<br>carbohydrate; 1.2.2 High molecular weight carbohydrate; 1.3 Roast<br>coffee; 1.3.1 Low molecular weight carbohydrate; 1.3.2 High molecular<br>weight carbohydrate; 1.4 Soluble coffee; 1.4.1 Low molecular weight<br>carbohydrate; 1.4.2 High molecular weight carbohydrate; 1.5 Reactions<br>of carbohydrates on roasting; 1.6 Functional properties of coffee<br>carbohydrates; 1.6.1 Role in soluble coffee processing; 1.6.2 Foam<br>1.6.3 Coffee fiberReferences; 1B Acids in Coffee; 1.7 Quantitative data<br>on organic acids in green coffee; 1.8 Determination of organic acids in<br>roasted coffee; 1.9 Acid formation mechanisms; 1.9.1 Acetic, formic,<br>lactic, glycolic and other carbohydrate derived acids; 1.9.2 Quinic acid;<br>1.9.3 Citric and malic acid; 1.9.4 Phosphoric acid; 1.10 Acid increase<br>on storage; 1.11 Volatile acids; 1.12 Acid content and sensory<br>characteristics; 1.12.1 Total acidity and sour taste; 1.12.2 Acid content |

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|                    | and acidity; 1.12.3 Roast kinetics References; 1C Lipids; 1.13<br>Introduction; 1.14 Coffee oil<br>1.14.1 Determination of total oil content1.14.2 Isolation of coffee oil<br>for detailed analysis; 1.15 Fatty acids; 1.15.1 Total fatty acids and fatty<br>acids in triglycerides; 1.15.2 Free fatty acids; 1.16 Diterpenes in the<br>lipid fraction of robusta and arabica coffees; 1.16.1 Free diterpenes;<br>1.16.2 Diterpene fatty acid esters; 1.16.3 Diterpenes in the lipid<br>fraction of roasted coffees; 1.16.4 Diterpenes in coffee: health aspects;<br>1.17 Sterols; 1.18 Tocopherols; 1.19 Other compounds; 1.20 Coffee<br>wax; References; 2 Chemistry II: Non-volatile Compounds, Part II; 2.1<br>Amino acids and Protein<br>2.1.1 Amino acids2.1.2 Amino acid derivatives; 2.1.3 Protein; 2.2 Fate<br>of chlorogenic acid derivatives during roasting; 2.2.1 Quinic acid<br>moiety; 2.2.2 Cinnamic acid derivative moiety; 2.3 Antioxidative<br>compounds in coffee brew; 2.3.1 Compounds occurring naturally in<br>green beans; 2.3.2 Effect of roasting on antioxidative activity; 2.4<br>Colored macromolecular compounds; 2.4.1 Characterization of colored<br>polymers; 2.4.2 Characterization of the zinc-chelating compounds in<br>coffee brews; References; 3 Chemistry III: Volatile Compounds; 3.1<br>Introduction; 3.2.9 Enrichment and identification; 3.2.4 Quantification;<br>3.2.5 Aroma models and omission experiments; 3.3 Raw coffee; 3.3.1<br>First studies; 3.3.2 Potent odorants; 3.3.3 Content and OAVs of<br>odorants; 3.4.3 Arabica versus robusta coffee; 3.4.4 Influence of<br>degree of roast; 3.4.5 Aroma changes during storage; 3.5 Coffee brew;<br>3.5.1 Extraction yield of potent odorants<br>3.6 Formation of odorants |
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| Sommario/riassunto | Coffee, one of the most commercially important crops grown, is<br>distributed and traded globally in a multi-million dollar world industry.<br>This exciting new book brings together in one volume the most<br>important recent developments affecting the crop. Contributions from<br>around 20 internationally-respected coffee scientists and technologists<br>from around the world provide a vast wealth of new information in the<br>subject areas in which they are expert. The book commences with<br>three cutting-edge chapters covering non-volatile and volatile<br>compounds that determine the flavour of coffee. Chapters c   |