

1. Record Nr.	UNINA9910811708203321
Titolo	Microbial growth in drinking-water supplies : problems, causes, control and research needs / / edited by Dirk van der Kooij and Paul W.J.J. van der Wielen
Pubbl/distr/stampa	London : , : IWA Publishing, , 2014
ISBN	1-68015-559-8 1-78040-041-1
Descrizione fisica	1 online resource (484 p.)
Altri autori (Persone)	KooijDirk van der WielenPaul W. J. J. van der
Disciplina	363.7394
Soggetti	Drinking water - Microbiology Microbial growth
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>""Cover""; ""Copyright""; ""Contents""; ""Authors and co-authors""; ""Acknowledgements""; ""Foreword""; ""Chapter 1: General introduction""; ""1.1 Water-Supply Microbiology""; ""1.1.1 Discoveries and impact""; ""1.1.2 A century of progress""; ""1.2 Regrowth: Problems and Assessment""; ""1.2.1 Problems""; ""1.2.2 Regrowth assessment""; ""1.3 Causes of Regrowth""; ""1.3.1 Growth kinetics and growth potential assessment""; ""1.3.1.1 Growth kinetics""; ""1.3.1.2 Assessment of the microbial-growth potential of drinking water""; ""1.3.2 Temperature""; ""1.3.3 Biofilms, sediments and hydraulics"" ""1.3.3.1 Biofilms"" ""1.3.3.2 Sediments""; ""1.3.4 Construction materials""; ""1.3.5 Disinfectant residual""; ""1.4 Scope and Aim""; ""1.5 References""; ""Chapter 2: Measurement of biostability and impacts on water treatment in the US""; ""2.1 Introduction""; ""2.2 Measurement of Biodegradable Organic Matter in Water""; ""2.3 Concentrations of AOC and BDOC in US Drinking Water Supplies""; ""2.4 Impact of Water Treatment on BOM""; ""2.4.1 Watersheds""; ""2.4.2 Disinfection""; ""2.4.3 Coagulation and sedimentation""; ""2.4.4 Granular media filtration""; ""2.4.5 Membrane filtration"" ""2.4.6 Bank infiltration"" ""2.4.7 Recycling of backwash water""; ""2.5 Materials in Contact with Water""; ""2.6 Development of a</p>

Bioluminescence AOC Method"; "2.6.1 Bioluminescence AOC assay"; "2.6.2 Application of the bioluminescence AOC assay"; "2.6.3 Development of a salt water bioluminescence AOC test"; "2.7 Conclusions"; "2.8 References"; "Chapter 3: Removal of organic matter in water treatment systems a€? Case studies in Japan"; "3.1 Introduction"; "3.2 Advanced Water Purification System in Osaka Water Works"; "3.2.1 Reduction of chlorine dosage"; "3.2.2 Bacterial-regrowth control by AOC reduction and less chlorine dosage"; "3.3 Organic Removals in a Hybrid Membrane Filtration System"; "3.3.1 PVDF MF membrane filtration coupled with pre-ozonation"; "3.3.2 PTFE MF membrane filtration coupled with powdered activated carbon adsorption and biological/chemical oxidation"; "3.3.3 Biofilm-membrane reactor for advanced drinking water treatment"; "3.4 Conclusion"; "3.5 References"; "Chapter 4: Organic matter, pipe materials, disinfectants and biofilms in distribution systems"; "4.1 Introduction"; "4.1.1 Organic matter and heterotrophic bacterial growth"; "4.1.2 Disinfectants, NOM and microbial growth"; "4.1.2.1 Primary disinfection"; "4.1.2.2 Secondary disinfection"; "4.1.3 Pipe materials"; "4.2 Interactions of Factors and Biofilm Growth"; "4.2.1 Importance of organic carbon and chlorine on biofilms"; "4.2.2 Importance of iron-corrosion products"; "4.2.3 Iron, organics and disinfectants"; "4.2.4 Iron, organics, disinfectants and corrosion control"; "4.2.4.1 Corrosion products and iron oxide coated beads"; "4.2.4.2 Laboratory and pilot distribution system studies"; "4.3 Conclusions and Recommendations"

Sommario/riassunto

Maintaining the microbial quality in distribution systems and connected installations remains a challenge for the water supply companies all over the world, despite many years of research. This book identifies the main concerns and knowledge gaps related to regrowth and stimulates cooperation in future research. Microbial Growth in Drinking Water Supplies provides an overview of the regrowth issue in different countries and the water quality problems related to regrowth. The book assesses the causes of regrowth in drinking water and the prevention of regrowth by water treatment and distribution. Editors: Dirk van der Kooij and Paul W.J.J. van der Wielen, KWR Watercycle Research Institute, The Netherlands.
