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| Soggetti                | Sewage - Purification - Nitrogen removal<br>Nitrification<br>Sewage - Purification - Activated sludge process   |
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| Nota di contenuto       | Nitrification and Denitrification in the Activated Sludge Process;<br>Contents; Preface; PART I OVERVIEW; 1 Nitrogen: Environmental and<br>Wastewater Concerns; 2 The Oxidation States of Nitrogen; 3<br>Nitrogenous Compounds; 4 Bacteria; 5 The Activated Sludge Process;<br>PART II NITRIFICATION; 6 Introduction to Nitrification; 7 Nitrifying<br>Bacteria; 8 Organotrophs; 9 The Wastewater Nitrogen Cycle; 10<br>Nitrogen Assimilation; 11 Forms of Nitrification; 12 Indicators of<br>Nitrification; 13 Nitrite Ion Accumulation; 14 BOD; 15 Dissolved<br>Oxygen; 16 Alkalinity and pH; 17 Temperature; 18 Inhibition and<br>Toxicity<br>19 Mode of Operation<br>20 Classification of Nitrification Systems; 21<br>Troubleshooting Key and Tables; PART III DENITRIFICATION; 22<br>Introduction to Denitrification; 23 Denitrifying Bacteria; 24 Biochemical<br>Pathway and Respiration; 25 Gaseous End Products; 26 Sources of<br>Nitrite Ions and Nitrate Ions; 27 Operational Factors Influencing<br>Denitrification; 28 Substrate or cBOD; 29 Free Molecular Oxygen; 30 |

The Occurrence of Denitrification; 31 Monitoring and Correcting Accidental Denitrification; 32 Zoning; 33 Benefits of Denitrification; APPENDIX I THE GRAM STAIN; APPENDIX II F/M, HRT, MCRT References Abbreviations and Acronyms; Chemical Compounds and Elements; Glossary; Index

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Sommario/riassunto

Nitrification and Denitrification in the Activated Sludge Process, the first in a series on the microbiology of wastewater treatment, comprises the critical topics of cost-effective operation, permit compliance, process control, and troubleshooting in wastewater treatment plants. Avoiding the technical jargon, chemical equations, and kinetics that typically accompany such texts, Nitrification and Denitrification in the Activated Sludge Process directly addresses plant operators and technicians, providing necessary information for understanding the microbiology and biological conditions that oc

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