

1. Record Nr.	UNINA9911019887203321
Autore	Gerardi Michael H
Titolo	Nitrification and denitrification in the activated sludge process // Michael H. Garardi
Pubbl/distr/stampa	New York, : Wiley-Interscience, c2002
ISBN	9786610366736 9781280366734 1280366737 9780470244746 0470244747 9780471461319 0471461318 9780471216681 0471216682
Descrizione fisica	1 online resource (207 p.)
Collana	Wastewater microbiology series
Disciplina	617.96072 628.354
Soggetti	Sewage - Purification - Nitrogen removal Nitrification Sewage - Purification - Activated sludge process
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 (p. 175-177) and index.
Nota di contenuto	Nitrification and Denitrification in the Activated Sludge Process; Contents; Preface; PART I OVERVIEW; 1 Nitrogen: Environmental and Wastewater Concerns; 2 The Oxidation States of Nitrogen; 3 Nitrogenous Compounds; 4 Bacteria; 5 The Activated Sludge Process; PART II NITRIFICATION; 6 Introduction to Nitrification; 7 Nitrifying Bacteria; 8 Organotrophs; 9 The Wastewater Nitrogen Cycle; 10 Nitrogen Assimilation; 11 Forms of Nitrification; 12 Indicators of Nitrification; 13 Nitrite Ion Accumulation; 14 BOD; 15 Dissolved Oxygen; 16 Alkalinity and pH; 17 Temperature; 18 Inhibition and Toxicity 19 Mode of Operation20 Classification of Nitrification Systems; 21

Troubleshooting Key and Tables; PART III DENITRIFICATION; 22 Introduction to Denitrification; 23 Denitrifying Bacteria; 24 Biochemical Pathway and Respiration; 25 Gaseous End Products; 26 Sources of Nitrite Ions and Nitrate Ions; 27 Operational Factors Influencing 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

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
