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| Nota di contenuto | Organic Pollutants in the Water Cycle; Contents; Preface; List of Authors; 1 Analytical Methods for Polar Pollutants; 1.1 Introduction; 1.2 The Analytical Process; 1.3 Sample Pretreatment and Analyte Extraction; 1.3.1 Sample Pretreatment; 1.3.2 Solid Samples; 1.3.3 Aqueous Samples; 1.3.3.1 Solid Phase Extraction; 1.3.3.2 Microextractions; 1.4 Gas Chromatographic Methods; 1.4.1 Derivatization; 1.4.1.1 Alkylation and Esterification; 1.4.1.2 Acylation; 1.4.1.3 Silylation; 1.4.2 Separation and Detection; 1.4.2.1 Separation; 1.4.2.2 Detection; 1.5 Liquid Chromatography-Mass Spectrometry 1.5.1 Liquid Chromatography 1.5.1.1 Ionic Analytes; 1.5.1.2 Non-Ionic Analytes; 1.5.1.3 Amphoteric Compounds; 1.5.1.4 Multiresidue Methods; 1.5.1.5 Chiral Separation; 1.5.2 Mass Spectrometry; 1.5.2.1 Ionization; 1.5.2.2 Mass Spectrometers and Modes of Operation; 1.5.2.3 Quantitation Strategies and Matrix Effects; 1.6 Conclusions; References; 2 Residues of Pharmaceuticals from Human Use; 2.1 Introduction; 2.2 Routes into the Environment; 2.3 Wastewater; 2.3.1 |

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2.5 Groundwater and Underground Passage
2.6 Drinking Water Treatment; 2.6.1 Sorption and Flocculation; 2.6.1.1 Flocculation; 2.6.2 Oxidation; 2.6.2.1 Ozonation; 2.6.2.2 Ozonation Products; 2.6.3 Membrane Filtration; 2.6.4 Evaluation of the Treatment Processes; References; 3 Antibiotics for Human Use; 3.1 Introduction; 3.2 Use of Antibiotics; 3.3 Emissions into the Environment; 3.4 Occurrence and Fate of Antibiotics; 3.4.1 Wastewater and Wastewater Treatment; 3.4.1.1 Hospital Wastewater; 3.4.1.2 Municipal Wastewater; 3.4.2 Surface Water; 3.4.3 Groundwater
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6.1.3 Herbicide Classes Considered

Sommario/riassunto

This first in-depth and comprehensive reference on the most pertinent polar contaminant classes and their behavior in the whole water cycle includes, among others, industrial chemicals, consumer products, polar herbicides and pharmaceuticals. All chapters are uniformly structured, covering properties, pollution sources, occurrence in wastewater, surface water, and groundwater as well as water treatment aspects, while ecotoxicological and assessment aspects are also covered. Among the authors are leading experts in their relevant fields, many of whom provide here groundbreaking research results
