



Handbook of

Water Analysis

edited by LEO M. L. NOLLET

Contents

Preface
Contributors

iii
ix

1. Sampling Methods in Surface Waters <i>Mathias Liess and Ralf Schulz</i>	1
2. Methods of Water Preservation <i>Bieluonwu Augustus Uzoukwu</i>	25
3. Statistical Treatment of Data <i>Bieluonwu Augustus Uzoukwu</i>	29
4. Physical Properties of Water <i>Jean-Yves Bottero</i>	41
5. Chemical Parameters <i>Hilda Ledo de Medina</i>	51
6. Organoleptical Properties of Water <i>Maria Anita Mendes and Marcos N. Eberlin</i>	75
7. Radioanalytical Methodology for Water Analysis <i>Jorge S. Alvarado</i>	101
8. Bacteriological Analysis <i>Chris W. Michiels and Els L. D. Moyson</i>	115
9. Algal Analysis—Organisms and Toxins <i>Glen Shaw and Maree Smith</i>	143

10.	Halogens <i>Geza Nagy and Livia Nagy</i>	169
11.	Sulfate, Sulfite, and Sulfide <i>Shreekant V. Karmarkar and M. A. Tabatabai</i>	195
12.	Analysis of Nitrates and Nitrites <i>Maria Teresa Oms, Amalia Cerdà, and Victor Cerdà</i>	201
13.	Ammonia <i>Stuart W. Gibb</i>	223
14.	Determination of Organic Nitrogen <i>Amalia Cerdà, Maria Teresa Oms, and Victor Cerdà</i>	261
15.	Phosphates <i>Ian D. McKelvie</i>	273
16.	Main Parameters and Assays Involved with the Organic Pollution of Water <i>Angel Cuesta, Antonio Canals, and José Luis Todolí</i>	297
17.	Organic Acid Analysis <i>Sigrid Peldszus</i>	313
18.	Determination of Phenolic Compounds in Water <i>Magnus Knutsson and Jan Åke Jönsson</i>	347
19.	Cyanides <i>Kazunori Ikebukuro, Hideaki Nakamura, and Isao Karube</i>	367
20.	Humic Substances in Water <i>Juhani Peuravuori and Kalevi Pihlaja</i>	387
21.	Major Metals <i>Payman Hashemi</i>	409
22.	Heavy Metals <i>Elena González-Soto, Elia Alonso-Rodríguez, and Darío Prada Rodríguez</i>	439
23.	Trace Elements: Li, Be, B, Al, V, Cr, Co, Ni, Se, Sr, Ag, Sn, Sb, Ba, and Tl <i>Rosa Cidu</i>	459
24.	Determination of Silicon and Silicates <i>Bieluonwu Augustus Uzoukwu and Leo M. L. Nollet</i>	483
25.	Analysis of Urea Herbicides in Water <i>Antonio Di Corcia</i>	487
26.	Analysis of Organochlorinated Pesticides in Water <i>Filippo Mangani, Michela Maione, and Pierangela Paima</i>	517

27. Residue Analysis of Carbamate Pesticides in Water <i>Evaristo Ballesteros Tribaldo</i>	537
28. Organophosphates <i>Monica Culea and Simion Gocan</i>	571
29. Fungicide and Herbicide Residues in Water <i>H. S. Rathore and A. A. Khan</i>	609
30. Methods for the Determination of Polychlorobiphenyls (PBCs) in Water <i>Roger Fuoco and Alessio Ceccarini</i>	655
31. Determination of PCDDs and PCDFs in Water <i>Anna Laura Iamiceli, Luigi Turrio-Baldassarri, and Alessandro di Domenico</i>	673
32. Polycyclic Aromatic Hydrocarbons <i>Miren López de Alda-Villaizán</i>	687
33. Analysis of BTEX Compounds in Water <i>Ignacio Valor, Mónica Pérez, Carol Cortada, David Apraiz, and Juan Carlos Moltó</i>	721
34. Oil and Greases and Petroleum Hydrocarbon Analysis <i>Rossiza Belcheva</i>	753
35. Asbestos in Water <i>Leo M. L. Nollet</i>	765
36. Analysis of Surfactants <i>Bieluonwu Augustus Uzoukwu and Leo M. L. Nollet</i>	767
37. Instruments and Techniques <i>A-M Siouffi</i>	785
<i>Index</i>	887