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Nota di contenuto	Garrido; 8. Multivariate analysis of extracted pigments using spectrophotometric and spectrofluorometric methods J. Neveux, J. Seppala; and Y. Dandonneau; Appendix: a proven simultaneous equation assay for chlorophylls a and b using aqueous acetone and similar assays for recalcitrant algae R.J. Porra; Part III. Water-Soluble 'Pigments': 9. Phycobiliproteins K.-H. Zhao, R.J. Porra and H. Scheer; 10. UV-absorbing 'pigments': mycosporine-like amino acids J.I. Carreto, S. Roy, K. Whitehead, C. Llewellyn and M.O. Carignan; Part IV.

Selected Pigment Applications in Oceanography: 11. Pigments and photoacclimation processes C. Brunet, G. Johnsen, J. Lavaud and S. Roy; 12. Pigment-based measurements of phytoplankton rates A. Gutierrez-Rodriguez and M. Latasa; 13. In vivo bio-optical properties of phytoplankton pigments G. Johnsen, A. Bricaud, N. Nelson, B.B. Prezelin and R.R. Bidigare; 14. Optical monitoring of phytoplankton bloom pigment signatures G. Johnsen, M.A. Moline, L.H. Pettersson, J.L. Pinckney, D.V. Pozdnyakov, E.S. Egeland and O.M. Schofield; Appendix: harmful algae toxins and pigments E.S. Egeland; Part V. Future Perspectives: 15. Perspectives on future directions C. Llewellyn, S. Roy, G. Johnsen, E.S. Egeland, M. Chauton, G. Hallegraeff, M. Lohr, U. Oster, R.J. Porra, H. Scheer and K.-H. Zhao; Part VI. Aids for Practical Laboratory Work: Appendix A. Update on filtration, storage and extraction solvents J.L. Pinckney, D.F. Millie and L. Van Heukelem; Appendix B. The pigment analyst's guide to HPLC hardware A.R. Neeley, C.S. Thomas, S.B. Hooker and L. Van Heukelem; Appendix C. Minimum identification criteria for identifying phytoplankton pigments E.S. Egeland; Appendix D. Phytoplankton cultures for standard pigments and their suppliers S. Roy, S.W. Wright and S.W. Jeffrey; Appendix E. Commercial suppliers of phytoplankton pigments E.S. Egeland and L. Schluter; Part VII: Phytoplankton pigments data sheets E.S. Egeland; Index.

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### Sommario/riassunto

Pigments act as tracers to elucidate the fate of phytoplankton in the world's oceans and are often associated with important biogeochemical cycles related to carbon dynamics in the oceans. They are increasingly used in in situ and remote-sensing applications, detecting algal biomass and major taxa through changes in water colour. This book is a follow-up to the 1997 volume *Phytoplankton Pigments in Oceanography* (UNESCO Press). Since then, there have been many advances concerning phytoplankton pigments. This book includes recent discoveries on several new algal classes particularly for the picoplankton, and on new pigments. It also includes many advances in methodologies, including liquid chromatography-mass spectrometry (LC-MS) and developments and updates on the mathematical methods used to exploit pigment information and extract the composition of phytoplankton communities. The book is invaluable primarily as a reference for students, researchers and professionals in aquatic science, biogeochemistry and remote sensing.

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