

1. Record Nr.	UNINA9910822323003321
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Titolo	Environmental laboratory exercises for instrumental analysis and environmental chemistry // Frank M. Dunnivant
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2004
ISBN	0471660272 0471660280 9780471660279
Edizione	[1st ed.]
Descrizione fisica	xvi, 330 p. : ill
Classificazione	519 628
Disciplina	628
Soggetti	Environmental chemistry Instrumental analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes bibliographical references and index
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- ENVIRONMENTAL LABORATORY EXERCISES FOR INSTRUMENTAL ANALYSIS AND ENVIRONMENTAL CHEMISTRY -- CONTENTS -- PREFACE -- ACKNOWLEDGMENTS -- TO THE INSTRUCTOR -- PART 1 PRELIMINARY EXERCISES -- 1 How to Keep a Legally Defensible Laboratory Notebook -- 2 Statistical Analysis -- 3 Field Sampling Equipment for Environmental Samples -- PART 2 EXPERIMENTS FOR AIR SAMPLES -- 4 Determination of Henry's Law Constants -- 5 Global Warming: Determining If a Gas Is Infrared Active -- 6 Monitoring the Presence of Hydrocarbons in Air around Gasoline Stations -- PART 3 EXPERIMENTS FOR WATER SAMPLES -- 7 Determination of an Ion Balance for a Water Sample -- 8 Measuring the Concentration of Chlorinated Pesticides in Water Samples -- 9 Determination of Chloride, Bromide, and Fluoride in Water Samples -- 10 Analysis of Nickel Solutions by Ultraviolet-Visible Spectrometry -- PART 4 EXPERIMENTS FOR HAZARDOUS WASTE -- 11 Determination of the Composition of Unleaded Gasoline Using Gas Chromatography -- 12 Precipitation of Metals from Hazardous Waste -- 13 Determination of the Nitroaromatics in Synthetic Wastewater from a Munitions Plant -- 14 Determination of a Surrogate Toxic Metal in a Simulated Hazardous

Waste Sample -- 15 Reduction of Substituted Nitrobenzenes by Anaerobic Humic Acid Solutions -- PART 5 EXPERIMENTS FOR SEDIMENT AND SOIL SAMPLES -- 16 Soxhlet Extraction and Analysis of a Soil or Sediment Sample Contaminated with n-Pentadecane -- 17 Determination of a Clay-Water Distribution Coefficient for Copper -- PART 6 WET EXPERIMENTS -- 18 Determination of Dissolved Oxygen in Water Using the Winkler Method -- 19 Determination of the Biochemical Oxygen Demand of Sewage Influent -- 20 Determination of Inorganic and Organic Solids in Water Samples: Mass Balance Exercise -- 21 Determination of Alkalinity of Natural Waters. 22 Determination of Hardness in a Water Sample -- PART 7 FATE AND TRANSPORT CALCULATIONS -- 23 pC-pH Diagrams: Equilibrium Diagrams for Weak Acid and Base Systems -- 24 Fate and Transport of Pollutants in Rivers and Streams -- 25 Fate and Transport of Pollutants in Lake Systems -- 26 Fate and Transport of Pollutants in Groundwater Systems -- 27 Transport of Pollutants in the Atmosphere -- 28 Biochemical Oxygen Demand and the Dissolved Oxygen Sag Curve in a Stream: Streeter-Phelps Equation -- APPENDIX A Periodic Table -- INDEX.

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Sommario/riassunto

FRANK DUNNIVANT teaches at Whitman College after having worked for several labs such as Oak Ridge National Laboratory, Idaho National Engineering Laboratory, and the Swiss Federal Institute for Water and Waste Water Pollution. He has also taught at Clemson University and Hartwick College. He has extensive experience with practical applications, research, and writing on environmental engineering and analytical science.

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