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Nota di contenuto	1. Water Quality and Aquaculture: Preliminary considerations -- 1.1. Introduction -- 1.2. The Role of Pond Aquaculture -- 1.3. Water Quality Restraints -- 1.4. Water Quality Management -- 1.5. Water Quality Measurement -- 1.6. Prospectus -- 3. Water Quality Requirements -- 2.1. Introduction -- 2.2. Food Webs and Aquaculture Production -- 2.3. Aquaculture Production in Pond Culture Systems -- 2.4. Phytoplankton Communities -- 2.5. Carbon in Aquaculture Ponds -- 2.6. Nitrogen in Aquaculture Ponds -- 2.7. Phosphorus in Aquaculture Ponds -- 2.8. Fate of Nutrients and Organic Matter -- 2.9. Dissolved Oxygen in Aquaculture Ponds -- 3. Water Quality Requirements -- 3.1. Introduction -- 3.2. Aquatic Toxicology -- 3.3. Water Temperature -- 3.4. Salinity -- 3.5. pH -- 3.6. Total Alkalinity -- 3.7. Total Hardness and Calcium -- 3.8. Dissolved Oxygen -- 3.9. Carbon Dioxide -- 3.10. Dissolved Gas Supersaturation -- 3.11. Ammonia -- 3.12. Nitrite -- 3.13. Nitrate -- 3.14. Hydrogen Sulfide -- 3.15. Copper and Other

Heavy Metals -- 3.16. Chlorine -- 3.17. Turbidity -- 4. Water Use -- 4.1. Introduction -- 4.2. Types of Ponds -- 4.3. Water Budgets -- 4.4. Water Requirement for Aquaculture -- 4.5. Water Exchange -- 4.6. Water Conservation Techniques -- 5. Liming -- 5.1. Introduction -- 5.2. Liming Materials -- 5.3. Effects on Water Quality and Fish Production -- 5.4. Identification of Ponds Needing Lime -- 5.5. Soil Characteristics and Liming -- 5.6. Lime Requirement -- 5.7. Liming Practices -- 5.8. Acid Rain -- 6. Fertilization -- 6.1. Introduction -- 6.2. Chemical Fertilizers -- 6.3. Manures -- 6.4. Principles of Pond Fertilization -- 6.5. Review of Fertilization Trials -- 6.6. The Practice of Pond Fertilization -- 7. Aeration -- 7.1. Introduction -- 7.2. Aeration and Production -- 7.3. Mechanical Aerators -- 7.4. Gravity Aeration -- 7.5. Aerator Performance -- 7.6. Improved Design for Paddle-Wheel Aerators -- 7.7. Practical Considerations -- 7.8. Predicting Dissolved Oxygen Concentrations -- 8. Water Circulation -- 8.1. Introduction -- 8.2. Temperature and Stratification -- 8.3. Devices for Circulating Pond Water -- 8.4. Measurement of Water Circulation -- 8.5. Effects of Water Circulation -- 9. Turbidity and Appearance of Water -- 9.1. Introduction -- 9.2. Measurements of the Appearance of Water -- 9.3. Enhancing Turbidity -- 9.4. Sources of Turbidity -- 9.5. Sedimentation in Ponds -- 9.6. Settling Basins and Erosion Control -- 9.7. Turbidity Removal from Pond Waters -- 10. Aquatic Weed Control -- 10.1. Introduction -- 10.2. Common Aquatic Weeds -- 10.3. The Occurrence of Weed Problems -- 10.4. Management of Aquatic Weed Problems -- 10.5. General Pond Management Practices -- 10.6. Biological Control -- 10.7. Chemical Control -- 10.8. Control of Phytoplankton Blooms -- 11. Off-Flavors and Harmful Algae -- 11.1. Introduction -- 11.2. Off-Flavors -- 11.3. Harmful Algae -- 12. Pollution -- 12.1. Introduction -- 12.2. Toxicity Tests -- 12.3. Types of Pollution -- 12.4. Toxicity Investigations -- 12.5. Protection from Pollution -- 13. Chemical, Physical, and Biological Treatments -- 13.1. Introduction -- 13.2. Oxidants -- 13.3. Piscicides -- 13.4. Toxic Metabolites and pH -- 13.5. Therapeutants -- 13.6. Probiotics -- 13.7. Bactericides -- 13.8. Miscellaneous Treatments -- 13.9. Registration of Chemicals -- 13.10. Application of Chemicals to Ponds -- 14. Waste Management -- 14.1. Introduction -- 14.2. Source of Nutrients and Organic Matter -- 14.3. Fate of Nutrients and Organic Matter -- 14.4. Sources of Suspended Solids -- 14.5. Volume of Effluents -- 14.6. Composition of Pond Effluents -- 14.7. Water Quality Improvement through Pond Management -- 14.8. Effluent Treatment -- 14.9. Environmental Effects -- 14.10. Solid Wastes -- 14.11. Effluent Regulations -- 14.12. Best Management Practices -- 15. Measurement of Water Quality -- 15.1. Introduction -- 15.2. Variability of Water Quality -- 15.3. Types of Water Assessment Programs -- 15.4. Guidelines for Sampling Programs -- 15.5. Water Samplers and Sample Storage -- 15.6. Water Analysis Kits and Portable Meters -- 15.7. Data Analysis and Records -- 16. Sustainability and Environmental Issues -- 16.1. Introduction -- 16.2. Environmental Concerns -- 16.3. Food Safety Considerations -- 16.4. Social Concerns -- 16.5. Sustainability -- 16.6. Environmental Impact Assessment -- 16.7. Impact Mitigation -- 16.8. Rehabilitation -- 16.9. Demonstration and Education -- 16.10. Industry Efforts -- References.

Sommario/riassunto

The efficient and profitable production of fish, crustaceans, and other aquatic organisms in aquaculture depends on a suitable environment in which they can reproduce and grow. Because those organisms live in water, the major environmental concern within the culture system is water quality. Water supplies for aquaculture systems may naturally be of low quality or polluted by human activity, but in most instances, the

primary reason for water quality impairment is the culture activity itself. Manures, fertilizers, and feeds applied to ponds to enhance production only can be partially converted to animal biomass. Thus, at moderate and high production levels, the inputs of nutrients and organic matter to culture units may exceed the assimilative capacity of the ecosystems. The result is deteriorating water quality which stresses the culture species, and stress leads to poor growth, greater incidence of disease, increased mortality, and low production. Effluents from aquaculture systems can cause pollution of receiving waters, and pollution entering ponds in source water or chemicals added to ponds for management purposes can contaminate aquacultural products. Thus, water quality in aquaculture extends into the arenas of environmental protection and food quality and safety. A considerable body of literature on water quality management in aquaculture has been accumulated over the past 50 years. The first attempt to compile this information was a small book entitled Water Quality in Warmwater Fish Ponds (Boyd 1979a).

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Nota di contenuto

Statistical Treatment of Analytical Data; Contents; Preface; 1 Introduction; 1.1 Statistics and quality assurance, control and assessment; 1.2 References; 2 Statistical measures of experimental data; 2.1 Mean and standard deviation; 2.2 Graphical distributions of the data - bar charts or histograms; 2.3 Propagation of errors (uncertainties); 2.4 References; 3 Distribution functions; 3.1 Confidence limit of the mean; 3.2 Measurements and distribution functions; 3.3 Mathematical presentation of distribution and; 3.4 Continuous distribution functions; 3.5 Discrete distribution functions 3.6 References 4 Confidence limits of the mean; 4.1 Confidence limits; 4.2 The Central Limit Theorem - the distribution of means; 4.3 Confidence limit of the mean; 4.4 Confidence limits of the mean of small samples; 4.5 Choosing the sample size; 5 Significance test; 5.1 Introduction; 5.2 Comparison of an experimental mean with an expected; 5.3 Comparison of two samples; 5.4 Paired t-test; 5.5 Comparing two variances - the F-test; 5.6 Comparison of several means; 5.7 The chi-squared (χ^2) test; 5.8 Testing for normal distribution - probability paper; 5.9 Non-parametric tests; 5.10 References

6 Outliers 6.1 Introduction; 6.2 Dixon's Q-test; 6.3 The rule of huge error; 6.4 Grubbs test for outliers; 6.5 Youden test for outlying laboratories; 6.6 References; 7 Instrumental calibration - regression analysis; 7.1 Errors in instrumental analysis vs. classical 'wet chemistry' methods; 7.2 Standards for calibration curves; 7.3 Derivation of an equation for calibration curves; 7.4 Least squares as a maximum likelihood estimator; 7.5 Tests for linearity; 7.6 Calculation of the concentration; 7.7 Weighted least squares linear regression; 7.8 Polynomial calibration equations

7.9 Linearization of calibration curves in nuclear measurements 7.10 Non-linear curve fitting; 7.11 Fitting straight-line data with errors in both coordinates; 7.12 Limit of detection; 7.13 References; 8 Identification of analyte by multi-measurement analysis; 8.1 References; 9 Smoothing of spectra signals; 9.1 Introduction; 9.2 Smoothing of spectrum signals; 9.3 Savitzky and Golay method (SG method); 9.4 Studies in noise reduction; 9.5 Extension of SG method; 9.6 References; 10 Peak search and peak integration; 10.1 A statistical method; 10.2 First derivative method

10.3 Second derivative method 10.4 Computer - visual separation of peaks; 10.5 Selection of the fitting interval and integration; 10.6 References; 11 Fourier Transform methods; 11.1 Fourier Transform methods in spectroscopy; 11.2 Mathematics of Fourier Transforms; 11.3 Discrete Fourier Transforms; 11.4 Fast Fourier Transforms (FFT); 11.5 References; 12 General and specific issues in uncertainty analysis; 12.1 Introduction; 12.2 The uncertainty era; 12.3 Uncertainties and the laws of nature; 12.4 The creation of the universe and the law of energy and mass

12.5 Statistical and systematic uncertainties

Sommario/riassunto

Statistical techniques have assumed an integral role in both the interpretation and quality assessment of analytical results. In this book the range of statistical methods available for such tasks are described in detail, with the advantages and disadvantages of each technique clarified by use of examples. With a focus on the essential practical application of these techniques the book also includes sufficient theory to facilitate understanding of the statistical principles involved. Statistical Treatment of Analytical Data is written for professional analytical chemists in

