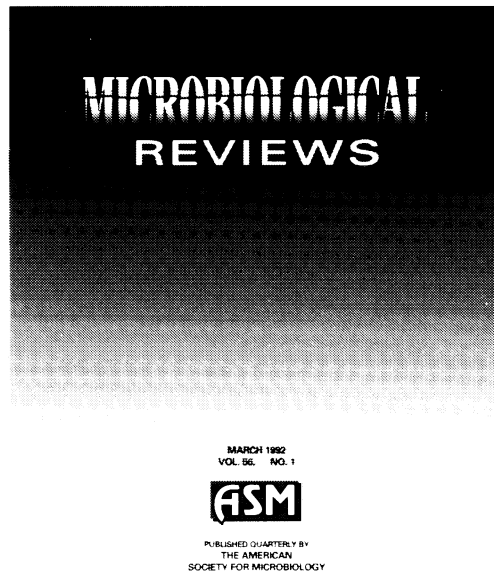


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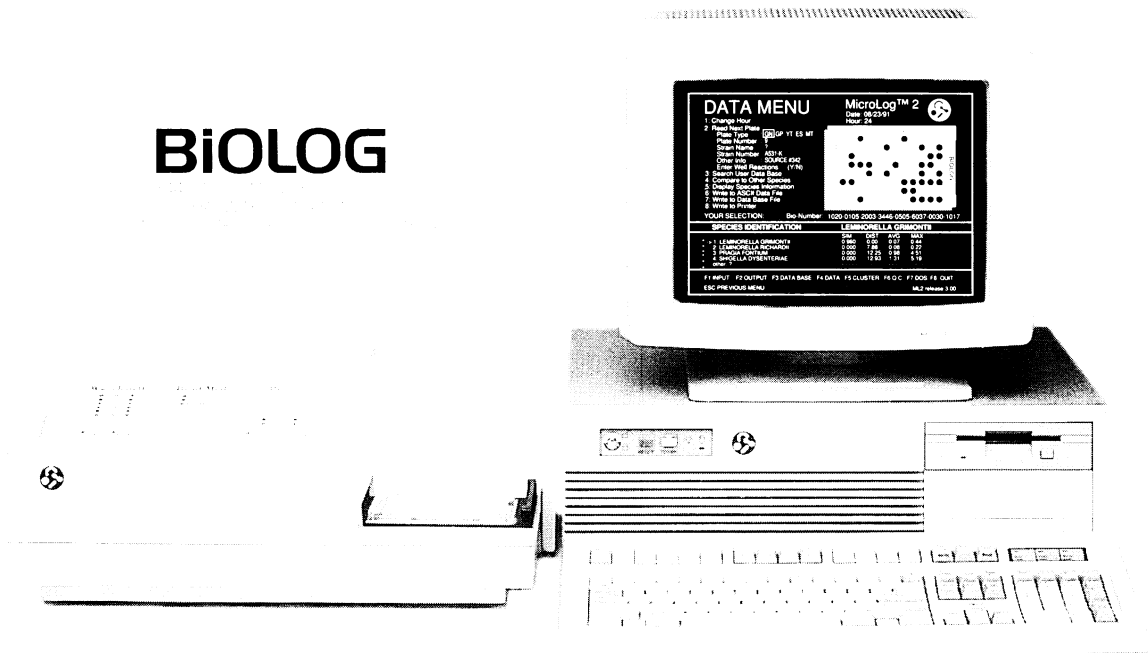
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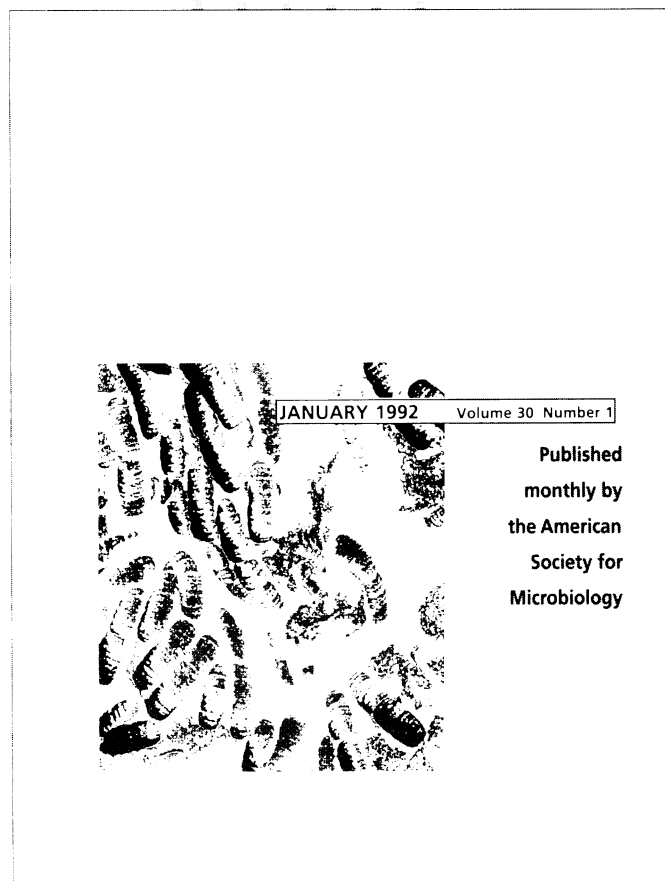
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Edited by **Martin Dworkin**,
University of Minnesota, Minneapolis

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November 1991. Hardcover (ISBN 1-55581-037-3). 382 pages, illustrated, index.

Prices: Member, \$59.00; Nonmember, \$69.00. **Canadian prices (include 7% G.S.T.):** Member, \$63.13; Nonmember, \$73.83.

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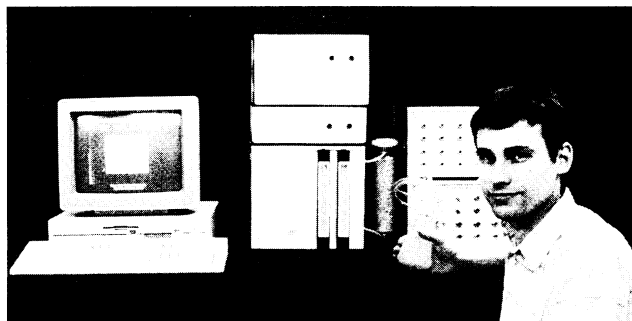
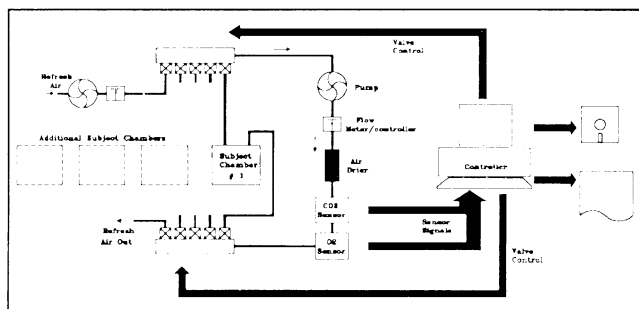
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The graph below shows the O₂ consumption rate and the CO₂ production rate of the BOD sample minus the O₂ consumption rate and the CO₂ production rate of the control sample. After two days, most of the breakdown of the organics had already taken place. In theory, a total of 1645 μL of O₂ would have been expected to have been consumed, whereas 1424 μL O₂ consumption was actually measured.

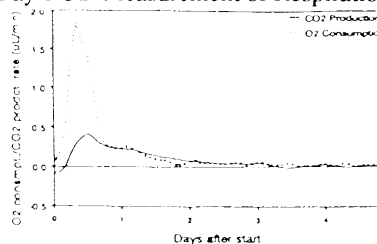
Biodegradation of Crude Oil

Oiled beach material was collected from Passage Cove (PC) and Disk Island (DI) in Prince William Sound, Alaska. Samples packed with dry ice, were transported to the Gulf Breeze Environmental Research Laboratory at Gulf Breeze, Florida or processed at the laboratory in Valdez, Alaska. Beach material was sieved (<12.5 mm diam, >2.75 mm diam) and mixed to generate an homogenized substrate of uniform size and degree of oiling (0.4% [weight] Prudhoe Bay crude oil).

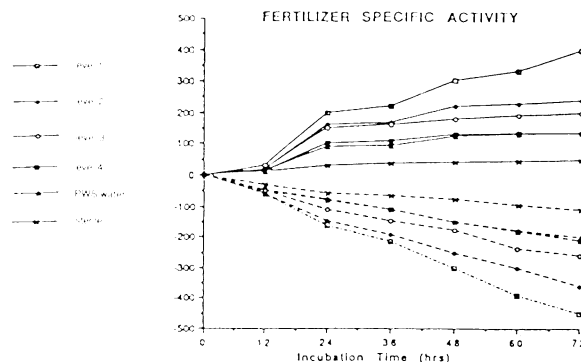
Indigenous, oil-degrading microorganisms associated with the beach material were treated with one of the following inorganic nutrient solutions: **level 1** 35.7 mmol N as NH₄NO₃ (350 ppm N) and 8.07 mmol P as KH₂PO₄ (70 ppm P), **level 2** 35 ppm N and 7 ppm P, **level 3** 3.5 ppm N and 0.7 ppm P or **level 4** 0.35 ppm N and 0.07 ppm P. Effects of nitrogen (35.7 mmol) or phosphorus (8.07 mmol) alone were also evaluated. Sterile nutrient solutions were prepared with water from Prince William Sound (PWS), Alaska. Daily treatments were applied at each high-tide, or once at the initial high-tide. Results were compared with those observed with high-tide solutions of filtered PWS water, or 3% NaCl in distilled water (pH=8.1). A sterile, killed cell control was prepared using an acidified PWS water as the high-tide solution.

The graph below summarizes results typical of those generated throughout the past 2 years. Here, addition of the high-level nutrient solution (level 1) resulted in a 2- to 3-fold increase in the activity of the oil-degrading population as determined by the release of CO₂ and the consumption of O₂. As expected, the ratio of CO₂ production to O₂ consumption is nearly 1.0. The stimulatory effect of inorganic nutrients was shown to be directly proportional to the amount of nutrient added to the test systems. (Information provided by Dr. James G. Mueller, US EPA Gulf Breeze, Florida)

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Immunochemical Assays and Biosensor Technology for the 1990s

Edited by **Robert M. Nakamura**, *Scripps Clinic and Research Foundation and University of California, San Diego, School of Medicine, La Jolla*; **Yasushi Kasahara**, *Fujirebio, Inc., Tokyo, Japan*; and **Garry A. Rechnitz**, *University of Hawaii, Honolulu*

Immunochemical assays, fundamental measurement methods in biomedical research and analysis, have recently undergone revolutionary change and development deriving from innovations in the use of nonisotopic labels and in the marriage of biochemistry with electronics. Other assays in the developmental phase hold even greater promise for improved testing efficiency and for decentralization of these complex and sensitive laboratory procedures.

This volume summarizes the principles and applications of fundamental immunochemical assays, various assay formats, and the current state of the art in ultrasensitive and nonisotopic assays. It is intended primarily for anyone working with immunochemical assays who wants a comprehensive view of options now available as well as a glimpse at likely improvements which will occur in this decade. Students and practitioners of modern analytical techniques in immunology, clinical chemistry, diagnostic microbiology, serology, and medical technology will especially benefit.

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I. Concepts of Immunochemical Assays (5 chapters by *Nakamura, Howanitz, Kricka, McCormack et al., and Feldkamp*)

II. Nonisotopic Immunochemical Assays (8 chapters by *Ritchie, Kasahara, Nakamura and Kasahara, Kasahara, Ishikawa, Nakamura, Bronstein and Sparks, and Diamandis and Christopoulos*)

III. Biosensors (7 chapters by *Ho and Rechnitz, Xu et al., Arnold, Yacynych, Wotring et al., Belli, and Eldefrawi et al.*)

January 1992. Hardcover (ISBN 1-55581-040-3), 421 pages, illustrated, index.

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RESEARCH ISSUES IN HUMAN BEHAVIOR AND SEXUALLY TRANSMITTED DISEASES IN THE AIDS ERA

Edited by **Judith N. Wasserheit**, **Seygi O. Aral**, and **King K. Holmes**; Associate editor, **Penelope J. Hitchcock**

This fascinating monograph is a collaborative effort by an interdisciplinary group of experts in clinical and social sciences from throughout the world, brought together under the auspices of the National Institute of Allergy and Infectious Diseases. Their common goal was to define a revolutionary new agenda for intervention-oriented behavioral research into the prevention and control of STDs, including HIV infection. They strongly believe that exciting new advances can be made in the field of STD research when the entire constellation of factors determining the incidence and natural history of these diseases is addressed, including the biological characteristics of the host, the biochemical and physical properties of the causative agent or pathogen, and the broad range of human behaviors that come into play.

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Approaches to Changing Human Behaviors: Implications for Design of Interventions for Control of Sexually Transmitted Diseases Including HIV Infection (4 chapters by *Hornik, Smith, Fishbein et al., and Newman et al.*)

Behavioral Interventions for Prevention and Control of Sexually Transmitted Diseases Including HIV Infection (5 chapters by *Hook, Plot and Laga, Judson and Paulman, Holmes and Aral, and Green and Washington*)

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Published in 1992 by ASM for the International Union of Microbiological Societies (IUMS), the *Bacteriological Code, 1990 Revision*, is the only internationally recognized and approved reference book covering the rules and procedures for correct bacterial nomenclature. This new edition substantially updates the previous *Code*, published in 1975, by incorporating all subsequent additions and modifications which have occurred from 1976 through September 1990. Underlying this effort is the belief that progress in bacteriology is furthered by a precise and internationally recognized system of nomenclature.

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