Fisheries and Environment Canada
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A Selected Bibliography on Oil Spill Dispersants

Economic and Technical Review Report
EPS-3-EC-78-2

Environmental Impact Control Directorate
January, 1978

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Minister of Supply and Services Canada 1978

Cat. No.: 4-63/78-2

ISBN 0-662-01573-8

Environment Canada
Environmental Protection Service

A SELECTED BIBLIOGRAPHY ON OIL SPILL DISPERSANTS

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Report No. EPS-3-EC-78-2
January, 1978

ABSTRACT

A selected and indexed bibliography on the chemistry, biological effects, use and effectiveness of oil spill dispersants is presented. It contains 364 references, compiled alphabetically and indexed by author and keyword to allow rapid access.

KEYWORDS: Bibliography, Dispersants, Dispersing, Oils, Pollution, Surfactants, Toxicology, Water Pollution

RESUME

Bibliographie choisie et indexée des effets chimiques et biologiques, des emplois et de l'efficacité des dispersants d'hydrocarbures. Elle comprend 364 références classées alphabétiquement et indexées par nom d'auteur et mots-clés pour consultation rapide.

MOTS-CLES: Bibliographie, dispersants, dispersion, hydrocarbures, pollution, surfactifs, toxicologie, pollution de l'eau.

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PREFACE

This bibliography is an attempt to compile the world's research and technical papers on the chemistry, biological effects, use and effectiveness of oil spill dispersants. It is a product of a Canadian Oil Spill Dispersant Testing Program that began in our laboratories in 1973 when Environment Canada published the "Guidelines on the Use and Acceptability of Oil Spill Dispersants". We hope that this bibliography assists in a complete understanding of the biological consequences of the use of dispersants.

Oil spill dispersants (otherwise known as emulsifiers, solvent-emulsifiers, or detergents) are mixtures of surfactants in a carrier solvent (hydrocarbon, alcohol, or water). Their role is to take oil as a slick on the water surface to oil as minute droplets in dispersions in the water column, thereby accomplishing dispersion and dilution of the oil in the water, transport of oil from the affected area, and some oil degradation through several routes.

This selected bibliography contains 364 numbered and indexed references, compiled up to September, 1977, and representing the available information base on oil dispersants in the mid-1970's. The references come from personal collections, searches of recent biological and pollution journals, numerous abstract and on-line computer bibliographic searches, many personal communications, and Moulder and Varley's "Bibliography on Marine and Estuarine Oil Pollution" (1971 and 1975), which helped lead us to the European literature. The references are papers and reports which contain data which substantially add to the knowledge of oil spill dispersants. Of the references, 57% are in the primary research literature, 29% are in the secondary technical literature, and 14% are unpublished in-house non-periodical reports (MS status). All of the references are available. General articles lacking details or data, news articles and semi-popular articles on oil spill dispersants have been omitted. Some articles on the chemistry and fate and effects of nonionic surfactants, present in newer second generation dispersants, have been included.

Section One, the bibliography, contains the references. Each reference has a unique number (1 to 364) and is listed in alphabetical order by author. Technical reports rewritten and eventually republished in primary journals are represented by both references. References written in a language other than English are presented with their English titles, followed by a bracket indicating the original language. Articles from primary journals have the titles of the journals abbreviated as in CASSI (Chemical Abstracts Service Source Index). Each reference is followed by appropriate keywords.

Section Two is an author index to all papers in Section One; all authors are listed, followed by the numbers pertaining to the particular references in Section One.

Section Three is a keyword index, listing keywords alphabetically from each of the 364 references, each keyword followed by the numbers pertaining to the particular references in Section One. Keywords were chosen based on content of title, abstract and paper, but emphasize the information available on specific dispersants, specific organisms, and the chemistry, biological effects, use and effectiveness of dispersants. Papers written in languages other than English or French were keyworded using either the title or the title and English summary.

Section Four is an addendum, a compilation of 38 references (nos. 365 to 402), listed alphabetically by author, that have been found or published since Spetember, 1977, and were not included in Sections One to Three.

It is hoped that this selected bibliography on oil spill dispersants will assist research workers, policy makers, environmental biologists, coast guard officials, and oil spill on-scene commanders who are all concerned with effective control of oil spills and cleanup measures that result in minimal environmental damage. However, this bibliography must be used by the above workers before its completeness and overall usefulness can be assessed. Hence, any comments or criticisms on its format or content and any new or missing references would be greatly appreciated and are solicited, as they would assist in improving future updated KWIC (Key Word in Context) computerized editions.

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ACKNOWLEDGMENTS

This project was supported by Dr. S.L. Ross and Mr. C.W. Ross of the Research and Development Division, Environmental Emergencies Branch, Environmental Protection Service, Ottawa, and by the Environmental Services Branch, Environmental Protection Service, Halifax, Nova Scotia.

We thank the staff of the Library, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, for their assistance searching for the references and their enthusiastic support for this project, Mr. E. Pessah of E.P.S., Halifax, Nova Scotia, for his continual encouragement and support of this project, and Mr. Paul Keizer (Marine Ecology Laboratory, Dartmouth, Nova Scotia) and Dr. Colin Duerden (E.P.S., Halifax) for their reviews of the manuscript.

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