

NATIONAL RESEARCH COUNCIL OF CANADA

NRC ASSOCIATE COMMITTEE ON SCIENTIFIC CRITERIA FOR
ENVIRONMENTAL QUALITY

THE BIOLOGICAL EFFECTS OF RADIO-FREQUENCY
AND MICROWAVE RADIATION

By

H.M. Assenheim
D.A. Hill
E. Preston
A.B. Cairnie

Edited by H.M. Assenheim
Division of Biological Sciences
National Research Council of Canada
Ottawa, Ontario

FOREWORD

The objective of this report is to summarize the effects of microwave and radio-frequency radiation on biological systems, with a view to assessing which effects may be trivial and which may pose problems. An attempt has been made (in Section I) to explain, in simple terms, the physical principles behind the interaction of radiation and tissue.

Section II deals with biological effects, including epidemiological studies, and also includes a discussion of criteria for exposure standards. No attempt has been made to recommend exposure standards, but a review has been made of factors which should be taken into account by those authorities responsible for standards. A detailed comparison is given of the standards of various countries.

This report is intended to be understandable to non-scientific personnel. Suitable appendices and references have been given for those readers who wish to learn more about the subject. The multitude of publications relevant to this topic (over 5000) has made it necessary to limit citations to only the most important. Thus, no attempt has been made to comment on all publications, only those deemed most relevant.

A summary of all sections of this report, with particular attention to the biological effects in Section II, is given in the concluding Chapter.

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H.M. Assenheimer - Editor