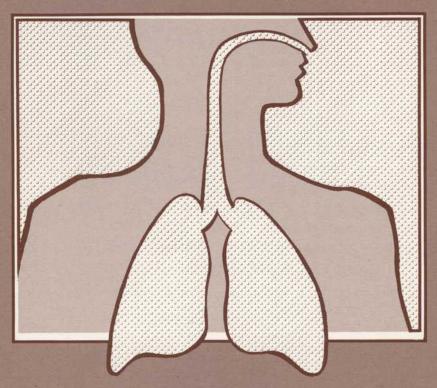
# Inhalation Toxicology of Air Pollution

Clinical Research Considerations



Frank/O'Neil/Utell/Hackney/Van Ryzin/Brubaker

(STP 872

## INHALATION TOXICOLOGY OF AIR POLLUTION: CLINICAL RESEARCH CONSIDERATIONS

ASTM SPECIAL TECHNICAL PUBLICATION 872 Robert Frank, Johns Hopkins University; John J. O'Neil, U.S. Environmental Protection Agency; Mark J. Utell, University of Rochester Medical Center; Jack D. Hackney, University of Southern California; John Van Ryzin, Columbia University; and Paul E. Brubaker, Brubaker Associates; editors

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#### Foreword

This publication, Inhalation Toxicology of Air Pollution: Clinical Research Considerations, contains papers presented at the Workshop to Develop Generic Protocols and Guidelines for the Performance of Clinical Pulmonary Studies Relevant to the National Ambient Air Quality Standards. This workshop was organized and sponsored by the Medicine and Biological Science Department of the American Petroleum Institute and was held on 21–23 Sept. 1983 in Philadelphia, PA.

Robert Frank, Johns Hopkins University, presided as chairman of the workshop and also served as editor of this publication, along with the following coeditors: John J. O'Neil, U.S. Environmental Protection Agency; Mark J. Utell, University of Rochester Medical Center; Jack D. Hackney, University of Southern California; John Van Ryzin, Columbia University; and Paul E. Brubaker, Brubaker Associates. Essential contributions to the workshop and to the publication of this volume were also provided by Lester A. Grant and F. Gordon Hueter, U.S. Environmental Protection Agency; Neill K. Weaver and Robert P. Strieter, American Petroleum Institute; and John H. Mitchell, Amoco Corporation.

#### Related ASTM Publications

- Definitions for Asbestos and Other Health-Related Silicates, STP 834 (1984), 04-834000-17
- Toxic Materials in the Atmosphere: Sampling and Analysis, STP 786 (1982), 04-786000-17
- Sampling and Analysis of Toxic Organics in the Atmosphere, STP 721 (1981), 04-721000-19

#### A Note of Appreciation to Reviewers

The quality of the papers that appear in this publication reflects not only the obvious efforts of the authors but also the unheralded, though essential, work of the reviewers. On behalf of ASTM we acknowledge with appreciation their dedication to high professional standards and their sacrifice of time and effort.

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