



Pollutants and Protectants: Evaluation and Assessment Techniques, 1/e

Ashita Sharma & Manish Kumar

2020	6.25 X 9.25	270 pp	Hardback	ISBN: 9789386768766	Price: 995.00
------	-------------	--------	----------	------------------------	---------------

About the Book

Advances in technological developments have led to increase in buildup of pollutants in the environment. Increase in concentration of pollutants due to ill planned anthropogenic activities has created a situation of a serious concern for human race. The present book addresses the issues related to increase in concentration of pollutants in the biosphere, protocols to assess the toxicity of pollutants and how it can affect human race. It also summarizes some protective agents present in the form of natural products which can protect us from the harmful effects of these pollutants. The first chapter of the book focuses on carcinogenicity of environmental pollutants. Next four chapters focus on specific emerging pollutants which have increased in concentration due to anthropogenic activities. These are followed by a couple of chapters on the analytical aspects and various techniques and bioassays that can be used to estimate the toxic effects of these pollutants. In the last three chapters of book authors have tried to compile information available regarding the phytochemicals which can have protective effects against the carcinogenic nature of pollutants.

Table of Contents

1. Environmental Pollutants as Carcinogens and Cancer Risk in Humans
 2. Heavy Metals and Soil Contamination: Sources, Bioavailability and Effects on Crop Plants
 3. Phthalates (Emerging Environmental Pollutants): Sources, Fate and Their Toxicological Consequences in Animals
 4. Dioxins and Dioxin-like Compounds (DLCs)
 5. Fluoride Toxicity and Its Potential Health Risks
 6. Role of Bioassays in Evaluation of Biochemical and DNA Damaging Effects of Synthetic Food Dyes
 7. Recent Advances in Analytical Methods for Detection of Pesticides
 8. Phytochemicals from Medicinal Plants as Potential Antimutagenic/Antigenotoxic Agents
 9. Bioprospecting Endophytic Actinobacteria of Medicinal Plants as Potential Anticancer Therapeutic Agents
 10. Unravelling the Role of Chemopreventive Agents as Modulators of Carcinogenesis
- Index

About the Author

Ashita Sharma :- is Associate Professor of Environmental Sciences at Chandigarh University, Gharuan, Mohali, India. She obtained her M.Sc. (Hons.) and PhD in Environmental Sciences from Guru Nanak Dev University, Amritsar, India. Dr. Sharma has qualified UGC-NET and has over 6 years of teaching experience and 7 years of research. Her areas of interest include soil remediation, environmental genotoxicity/ carcinogenicity and biomonitoring. During her research, she published many articles in journals and books of international repute. She is currently guiding graduate and doctorate students. Also, she is a member of various professional bodies and is also acknowledged for reviewing articles for the journal *Chemosphere*.

Manish Kumar :- is Assistant Professor of Botany at S.D. College, Barnala, Punjab, India. Dr. Kumar is M.Sc. (Hons.), M.Phil. & Ph.D. in Botany from Guru Nanak Dev University, Punjab, India and has qualified CSIR-UGC NET and GATE. He has over 3 years of teaching experience and 9 years of research. His areas of specialization include cancer chemoprevention, cancer cell therapeutics, environmental mutagenesis and medicinal plants. He has published more than 35 research articles in journals and books of international repute. Recently, he has edited a book entitled *Evaluation of Environmental Contaminants and Natural Products: A Human Health Perspective* with Bentham Science Publishers. He has been member of editorial board and reviewer board of national and international journals. He has been recognized for his

outstanding contribution in reviewing for the *Journal of Traditional and Complementary Medicine* (Elsevier) in 2017. He is a member of various national and international conferences/programs/Societies.