

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Occupational Exposures in Mists and Vapours from Strong Inorganic Acids; and other Industrial Chemicals. Volume 54.** - International Agency for Research on Cancer, Lyon 1991. 336 pp. Sw. Fr. 65.00.

The introducing Monographs of this IARC publication deal with the possible carcinogenicity and genotoxicity of strong inorganic acids: sulfuric, hydrochloric, nitric and phosphoric. These acids may be present in air in three different forms: mist, vapour and gas. The term "mists" refers to liquid aerosol formed by condensation of a vapour or atomization of a liquid. According to the IARC Working Group there is sufficient evidence that occupational exposure to strong-inorganic-acid mists containing sulfuric acid is carcinogenic. Anthropogenic activities result in a significant contribution to the atmospheric burden of sulfur compounds, mainly sulfur dioxide. The emission of sulfur dioxide was in Czechoslovakia in 1980 3100 thousand tones. Although this gas is toxic at high concentrations, there is inadequate evidence for its carcinogenicity in humans. The other three industrial compounds covered in this volume (diethyl sulfate, diisopropyl sulfate, and 1,3-butadiene) are probably carcinogenic to humans. Appendix I: "Summary tables of genetic and related effects", covers available data on DNA damage, gene mutations in nonmammalian systems (prokaryotes, lower eukaryotes, plants, insects) and in mammalian systems *in vitro* and *in vivo*, and further data on chromosome aberrations, sister chromatid exchanges and cell transformation. Appendix II presents activity profiles for genetic and related events, with the lowest effective and highest ineffective doses for the used bioassays.

T. GICHNER (*Praha*)

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Solar and Ultraviolet Radiation. Volume 55.** - International Agency for Research on Cancer, Lyon 1992. 316 pp. Sw. Fr. 65.00.

In the USA skin melanoma has been second only to lung cancer in its rate of increase in incidence over the last 40 years. As demonstrated in this volume of the IARC series on carcinogenicity and genotoxicity of occupational and environmental factors, this is highly probably associated with exposure to solar, and ultraviolet radiation from medical and cosmetic devices, general illumination and industrial sources. Solar radiation is largely optical radiation (UV, visible and infrared). The UV component of terrestrial radiation from the sun comprises about 95% UVA (315-400 nm) and 5% UVB (280-315 nm) radiation. The possibility of that the UVB component of solar radiation will increase as a result of depletion of the ozone layer is a matter of concern. The introductory parts of this publication presents solar, and UV radiation exposure data from natural and artificial sources. Part II and III deals with studies of cancer in humans and animals. Of theoretical interest is the chapter on other biological effects of UV radiation, e.g., on the formation of DNA photoproducts, human excision repair disorders, DNA damage, mutagenicity, chromosomal effects, transformation and effects of cellular and viral gene expression. The book is accompanied by a Glossary of terms and by a chapter on topical sunscreens, including protective and adverse effects.

T. GICHNER (*Praha*)