

BIOLOGICAL AND MEDICAL SCIENCES—Field 6

Toxicology—Group 6T

Previous research has shown that smoking and nicotine may have an effect on visual functions. Several studies were conducted to determine if smoking and smoking deprivation would have an effect on the detection of movement by peripheral vision and to determine the effects of smoking and smoking deprivation on time estimation performance. It was found that under levels of low illumination, nonsmokers had a significantly larger peripheral field, that deprived smokers were better than smokers in detecting movement in the periphery of the visual field and that subjects on a velocity estimation task who had been deprived of smoking performed better than smokers. In a study concerned with relationships between nicotine level and performance, high nicotine smokers performed better on a movement detection task than low nicotine or deprived smokers. On a time estimation task, it was found that nicotine had some adverse effects but, under other conditions, actually improved performance. (Author)

AD-225 093/4QA PC A02/MF A01
Army Chemical Warfare Labs Army Chemical Center MD
Cutaneous Application of 1.1(Malathion Powder to Volunteers
PHILIP J. GUTENTAG. Jul 59, 12p Rept no. 2290
Distribution limitation now removed. NOTE: Only 35mm microfilm is available. No microfiche.

Descriptors: "Acetylcholine, "Cholinesterase, Coatings, Inhibition, "Insecticides, "Physiology, "Powders, "Skin (Anatomy), "Toxicity.
Identifiers: "Toxic substances, "Malathion.

No abstract available.

CONF-771147-1 MF A01
Oak Ridge National Lab., Tenn.
Studies with a New Experimental Model in Respiratory Carcinogenesis.
P. Nettesheim, and T. Yarita. 1977, 27p
Contract W-7405-ENG-26
Symposium on the Syrian hamster in toxicology. Cambridge, MA, USA, 30 Nov 1977, Portions of document are illegible.
Microfiche copies only.

Descriptors: Carcinogens, "Respiratory system, Biological effects, Biological models, "Carcinogenesis, Carcinomas, Dose-response relationships, Hamsters.
Identifiers: ERDA/560305, Neoplasms, Exposure, Hamsters, Laboratory animals, Experimental data, "Urea/N-nitroso-N-methyl.

For abstract, see ERA citation 03:025217.

COO-3140-36 PC A03/MF A01
Connecticut Univ. Health Center, Farmington. School of Medicine.
Toxicology and Metabolism of Nickel Compounds. Progress Report, December 1, 1976--November 30, 1977.
F. W. Sunderman, Jr. 15 Aug 77, 35p
Contract EY-76-S-02-3140

Descriptors: "Nickel compounds, Metabolism, Rats, Toxicity.
Identifiers: ERDA/560305, Laboratory animals, Experimental data, "Toxicology, "Toxic substances.

For abstract, see ERA citation 03:025218.

NTIS/PS-78/0442/0GA PC N01/MF N01
National Technical Information Service, Springfield, Va.
Toxicity of Vinyl Chloride (A Bibliography with Abstracts).
Rept. for 1969-Apr 78,
Pernell W. Crockett. May 78, 86p

Supersedes NTIS/PS-77/0365, and NTIS/PS-76/0187.

Descriptors: "Bibliographies, "Vinyl chloride, "Polyvinyl chloride, "Toxicology, "Industrial medicine, Public health, Epidemiology, Exposure, Polyvinyl chloride resins, Combustion products, Sources, Toxicity, Abstracts.

Research is cited on the health hazards from exposure to vinyl chloride and vinyl chloride resins. Studies are included on the epidemiology of industrial and public exposures to the compound and its degradation and combustion products. (This updated bibliography contains 79 abstracts, 10 of which are new entries to the previous edition.)

ORNL/TIRC-77/4 PC E13/MF A01
Toxicology Information Response Center, Oak Ridge, Tenn.
Health Aspect of Chloroform: A Review and an Abstracted Literature Collection, 1907--1977.
S. G. Winslow, and H. B. Gerstner. Dec 77, 252p
Contract W-7405-ENG-26

Descriptors: "Chloroform, "Bibliographies, Carcinogenesis, Chemical properties, Metabolism, Reviews, Toxicity.
Identifiers: ERDA/990300, ERDA/560305, ERDA/560306, Abstracts, "Environmental health, "Toxicology, "Toxic substances, Indexes (Documentation), Organic solvents.

For abstract, see ERA citation 03:025611.

PB-278 374/4GA Not available NTIS
Health Effects Research Lab., Research Triangle Park, N.C.
Role of Time as a Factor in the Toxicity of Chemical Compounds in Intermittent and Continuous Exposures. Part II. Effects of Intermittent Exposure.
Journal article.
D. L. Coffin, D. E. Gardner, G. I. Sidorenko, and M. A. Pinigan. 1977, 10p EPA/600/J-77/105b
Prepared in cooperation with Institute of General and Municipal Hygiene, Moscow (USSR).
Pub. in Jnl. of Toxicology and Environmental Health, 3 p821-828 1977.

Descriptors: "Nitrogen dioxide, "Sulfur dioxide, "Benzene, "Toxicology, Laboratory animals, Experimental data, Respiration, Air pollution, Toxicity, Exposure, Time series analysis, Chemical compounds.
Identifiers: Reprints, "Air pollution effects (Humans).

Because of fluctuations in levels of industrial air pollution linked to weather and other factors, a joint U.S.-Soviet research team studied differences in the effect of time in exposures of air-breathing animals to controlled varied concentrations of air pollutants. An experimental model environment was used to investigate the effects of nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and benzene (C₆H₆) in the air environment of laboratory animals, with both continuous and intermittent exposures. Part II concerns the toxicities of intermittent exposures to C₆H₆ and NO₂; three parameters were used. The toxic effects of NO₂ with intermittent exposure were not reduced as was the case with C₆H₆. Data are presented to show that intermittent exposure to NO₂ may be more toxic than continuous exposure when short-term peaks of NO₂ concentrations are involved.

PB-278 381/9GA Not available NTIS
Health Effects Research Lab., Research Triangle Park, N.C. Clinical Studies Div.
Increased Infectivity with Exposure to Ozone and Sulfuric Acid.
Journal article.

Donald E. Gardner, Frederick J. Miller, Joseph W. Illing, and Jerome M. Kirtz. 21 Apr 77, 8p
EPA/600/J-77/104
Pub. in Toxicology Letters, v1 p59-64 1977.

Descriptors: "Ozone, "Sulfuric acid, "Respiratory diseases, "Immunology, Lung, Toxicity, Immunity, Air pollution.
Identifiers: Reprints, "Air pollution effects (Humans), Synergistic effects of air pollutants.

The effects of the combined action of ozone (O₃) and sulfuric acid (H₂SO₄) aerosol on host susceptibility to an aerosol of viable microorganisms were studied. Exposure to O₃ (0.196 mg/cu m) was for 3 h, while exposure to H₂SO₄ (0.9 mg/cu m) lasted 2 h. Neither pollutant alone caused a significant increase in mortality as compared to clean air controls. In those studies involving the combined action of the sequential exposure to the two pollutants, there was a statistically significant increase in respiratory infections in the treated group over controls (indicated by per cent mortality) only when the exposure to the oxidant immediately preceded that of the acid. (Copyright (c) Elsevier/North-Holland Biomedical Press 1977.)

PB-278 450/2GA PC A02/MF A01
Health Effects Research Lab., Research Triangle Park, N.C. Environmental Toxicology Div.
Disposition of 14C and/or 74As-Cacodylic Acid in Rats After Intravenous, Intratracheal, or Peroral Administration.
Journal article.
J. T. Stevens, L. L. Hall, J. D. Farmer, L. C. DiPasquale, and N. Chernoff. Aug 77, 9p
EPA/600/J-77/107
Pub. in Environmental Health Perspectives, v19 p151-157 1977.

Descriptors: "Bioassay, "Pesticides, "Herbicides, Arsenic organic compounds, Toxicology, Absorption (Biology), Metabolism, Excretion, Dosage, Parenteral infusions, Rats, Laboratory animals, Ingestion (Biology), Concentration (Composition), Blood, Tissues (Biology), Muscles, Kidney, Liver, Lung, Labeled substances, Erythrocytes.
Identifiers: Reprints, "Cacodylic acid, Pesticide residues, Gavage, Body burdens, Bioaccumulation.

The distribution, excretion, and possible metabolism of (14)C- and/or (74)As-cacodylic acid, and organoarsenical herbicide, was studied in rats following a single intravenous injection, intratracheal instillation or oral gavage. Male Sherman rats were dosed at levels ranging from 200 mg/kg to 120 micrograms/kg. The extent and rate of lung absorption was greater than gastrointestinal absorption. Concentrations in the liver and whole blood were higher after peroral dosing than intravenous administration. Levels observed in plasma and other tissues were similar after all three routes following the absorptive phase. The percent dose found in the whole blood, red blood cells, and plasma was similar for all doses given by these routes. Less than 0.1-1/2 of the administered dose was recovered as (14)CO₂ by any route at 24 hr after administration. Levels in all tissues decreased rapidly, but remained high in whole blood. The red blood cells were found to be the major site of body burden of cacodylic acid.

PB-278 527/7GA PC A05/MF A01
National Cancer Inst., Bethesda, Md. Carcinogenesis Program.
Bioassay of Malathion for Possible Carcinogenicity.
Technical rept.
Dec 77, 98p NCI-CG-TR-24, DHEW/PUB/NIH-78-824

Descriptors: "Bioassay, "Malathion, "Insecticides, "Pesticides, Toxicology.