

Recent releases from NTP and NIOSH

The National Toxicology Program has released several toxicity and carcinogenesis studies recently, and summaries of conclusions drawn by the investigators are reprinted here. Readers are urged, however, to examine the full report before making decisions about the use of these materials.

Copies of these documents can be obtained in printed form from NTP Central Data Management, National Institute of Environmental Health Sciences, P.O. Box 12233, MD A0-01, Research Triangle Park, NC 27709-2233 (919-541-3419). The information is also available electronically on the World Wide Web (http://ntp-server.niehs.nih.gov/main_pages/ntp_docs_pubs.html).

Toxicity study

***o*-Nitrotoluene and *o*-Toluidine hydrochloride.** The results of these studies have confirmed the carcinogenicity of *o*-nitrotoluene based on the development of a high incidence of mesotheliomas and a small number of cholangiocarcinomas in male rats after only 13 or 26 weeks of exposure. The increased incidence of mesothelioma indicates the relatively greater carcinogenic potential or decrease in tumor latency for *o*-nitrotoluene compared with an equivalent dose of *o*-toluidine hydrochloride. Although the chemicals are similar in structure, basic differences exist in the way the compounds are metabolized (e.g., methyl group oxidation for *o*-nitrotoluene versus aromatic ring oxidation for *o*-toluidine hydrochloride). It may be that the metabolite responsible for the increased incidence of mesotheliomas may be a relatively minor one for *o*-toluidine hydrochloride and a major one for *o*-nitrotoluene. Metabolites of both compounds are excreted primarily in the urine; however, the renal effects seen with *o*-nitrotoluene and the urinary bladder hyperplasia observed with *o*-toluidine hydrochloride

Toxicity study				
Chemical	CAS no.	NTP no.	Study	Species
<i>o</i> -Nitrotoluene	88-72-2	44	Feed	FR
<i>o</i> -Toluidine hydrochloride	636-21-5			

Toxicology and carcinogenesis study				
Acetonitrile	75-05-8	447	Inhalation	FR, BM

Note: The CAS number is the Chemical Abstracts Service registry number. The NTP number is the number of the document in the Toxicity Report Series; use this number to request paper copies of reports from NIEHS. The "Study" column indicates how the chemical was administered to the animal. The "Species" column uses the following abbreviations to show the animal(s) used in the study: FR for F344/N rats and BM for B6C3F₁ mice.

ride suggest differences in the toxicity of the urinary metabolites of each chemical. These findings, plus the presence of testicular degeneration, hepatotoxicity, and cholangiocarcinoma only in *o*-nitrotoluene groups and the relatively greater spleen toxicity seen in the *o*-toluidine hydrochloride groups, indicate that the important toxic and carcinogenic effects of *o*-nitrotoluene may not be attributed primarily to the intestinal tract reduction of the nitro group to the amine.

Toxicology and carcinogenesis study

Acetonitrile. Under the conditions of these two-year inhalation studies, there was equivocal evidence of carcinogenic activity in male F344/N rats on the basis of marginally increased incidences of hepatocellular adenoma and carcinoma. There was no evidence of carcinogenic activity in female rats exposed to 100, 200, or 400 ppm or in male or female mice exposed to 50, 100, or 200 ppm. Exposure to acetonitrile by inhalation resulted in increased incidences of hepatic basophilic foci in male rats and of squamous hyperplasia of the forestomach in male and female mice.

New from NIOSH

"Violence in the Workplace: Risk Factors and Prevention Strategies" re-

views what is known about fatal and nonfatal violence in the workplace, defines research gaps, and recommends general approaches to prevention of workplace violence. Copies of this document (NIOSH Publication No. 96-100) are available from NIOSH Publications Dissemination, EID, 4676 Columbia Pkwy., Cincinnati, OH 45226-1998 (800-356-4674; fax 513-533-8573).

New from NIEHS

Environmental Health Perspectives, Vol. 104, Supplement 3, May 1996: "Environmental Mutagens" consists of papers presented at the 2nd International Conference on Environmental Mutagens in Human Populations, Prague, Czech Republic, Aug. 20-25, 1995. Conference goals were to enhance awareness of human health problems caused by environmental mutagens and carcinogens, update achievements in the field, foster international cooperation, and establish future directions of research.

Print subscriptions to *Environmental Health Perspectives Supplements* are available in the United States for \$46 a year from the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 (202-512-1800; fax 202-512-2250).

Information about current issues is also available on the World Wide Web (<http://ehpnet1.niehs.nih.gov>).