

NOTICE OF RESEARCH PROJECT TOX-TIPS

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SUPPORTING ORGANIZATION: The Pennsylvania State University Agricultural Experiment Station		SUPPORTING ORGANIZATION NUMBER(S): Contract No: and/or Project PA 2211 Control No:	
PROJECT TITLE: Histopathologic and Histochemical Indices of <u>Sublethal</u> Pesticide Toxication in Fish			
INVESTIGATOR(S): Adam Anthony W. H. Neff		DEPARTMENT/SPECIALTY, SCHOOL OR DIVISION:	
PERFORMING ORGANIZATION: Name and Address. The Pennsylvania State University Including Zip Code. 208 Mueller Bldg. University Park, PA 16802		PERIOD FOR THIS NRP: Start Date: September 1976 End Date: June 1981 Annual Funding: \$15,500	
<p>PROJECT SUMMARY:</p> <p>Laboratory tests have been conducted to investigate histopathologic and histochemical changes in tissues of brook trout (<i>Salvelinus fontinalis</i>) exposed to sublethal dosages of the pesticides atrazine, carbaryl, 2,4-dichlorophenoxyacetic acid, and parathion for one week. Toxicant concentrations in ppb which kill 0% of the fish within seven days were used. Histochemical methods were selected to provide measures of cellular constituents involved in the control or regulation of metabolism as well as end products of synthesis. Preliminary cytophotometric analyses were made of DNA and RNA changes in respiratory, hepatic, renal, and endocrine tissue. Quantification of nuclear DNA and cytoplasmic RNA content was made on an individual cell basis using scanning-integrating microdensitometry. The histopathologic analyses will be structured into a pathological index to measure tissue-specific and whole-fish pathology. The histochemical tests employed will be screened for potential short-term bioassays of toxicant effects.</p>			
<p>CAS Registry No.</p> <p>Atrazine (2-Chloro-4-ethylamino-6-isopropylamino-s-triazine) 1912-24-9</p> <p>Carbaryl (1-Naphthyl N-methylcarbamate) 63-25-2</p> <p>2,4-Dichlorophenoxyacetic acid 94-75-7</p> <p>Parathion (Diethyl p-nitrophenyl phosphorothioate) 56-38-2</p>			

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The bibliographic references (author, title, source) on this page have been obtained from searches of the following National Library of Medicine's on-line retrieval files: TOXLINE, CHEMLINE, MEDLINE, SDILINE, and CANCERLINE. The searches, made on the substances that are the subject of the test described in the Notice of Research Project, usually have retrieved the most recent citations from these files. Because these searches have not been exhaustive, the investigator may wish to obtain more complete searches on the test substances by searching the NLM on-line files or by contacting the Toxicology Information Response Center (TIRC) at the Oak Ridge National Laboratory, P.O. Box X, Building 2024 Oak Ridge, TN 37830 — Phone: 615- 576-1743.

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