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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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MEMORANDUM

TO: Dave Van Ormer, Toxicologist  
Toxicology Branch  
Hazard Evaluation Division (TS-769)

OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Evaluation of Validated IBT Study No. A9144; Twenty-eight Day Subacute Oral Cholinesterase Activity Study with Carzol SP (EP-322 HCl Technical) in Female Albino Rats  
CASWELL#465B

Recommendation:

It is recommended that this study be classified as Supplementary Data. The NOEL for RBC and plasma ChE appears to be 0.5 mg/kg; a NOEL cannot be established for brain ChE.

Review of Data:

Twenty-eight Day Cholinesterase Study in Female Pats, IBT No. A9144, February 5, 1971 and submitted by Nor-Am Agricultural Products.

(This study was validated on September 15, 1982 by Dynamac Corporation and classified as Supplementary Data on the basis of the following deficiencies:

1. No baseline cholinesterase data
2. No compound preparation records
3. No protocol in the raw data.)

Twenty female Charles River albino rats were administered 0.5 mg/kg of Carzol technical daily for 28 days in a corn oil suspension by gavage. Plasma and RBC cholinesterase were measured prior to compound administration after days 7, 14, 21 and 28. Five animals were sacrificed after days 7, 14, 21 and 28. Observations and necropsy results were neither reported nor present in the raw data. Cholinesterase was measured using the method of Levine et. al.\*

\*Levine, J.B., Scheidt, R.A., Nelson, V. "An Automated Micro-Determination of Serum Cholinesterase", Automation in Analytical Chemistry (Technican Symposia). New York, 1965, pp. 582-585.

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Results:

Plasma and RBC cholinesterase activity was not affected over the course of the study. Though brain cholinesterase values did not decline from days 7 to 28, the absence of baseline values precludes interpreting the data to indicate a lack of effect of Carzol on brain cholinesterase when administered at 0.5 mg/kg to the female rat.

Core Classification: Supplementary Data.

No effect on plasma or RBC cholinesterase is observed at 0.5 mg/kg (HDT). Clinical observations were not available. A NOEL for brain cholinesterase cannot be established due to a lack of baseline values.

*Gary J. Burin* *SDC*  
Gary J. Burin, Toxicologist *9/30/82*  
Toxicology Branch *16/05/82*  
Hazard Evaluation Division (TS-769) *10/03/82*

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