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

MEMORANDUM

MAR 18 1983

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

TO: William Miller, Product Manager #16
Registration Division (TS-767)

THRU: Edwin R. Budd, Section Head
Section II, Toxicology Branch
Hazard Evaluation Division (TS-769)

Budd 3/18/83

SUBJECT: Dimethoate: Protocol for Gene Mutation Testing in CHO Cells in Culture.

TOX Chem No. 358

EPA Reg. ~~Accession~~ No. 241-233

Caswell Number: 358

Test Protocol: Chinese Hamster Ovary/Hypoxanthine Guanine Phosphoribosyl - Transferase Test, received March 15, 1983

Testing Laboratory: American Cyanamid
Agricultural Research Division
Princeton, New Jersey

The protocol is generally well written and the details of cell culturing and handling are described in accordance with this laboratory's experience with this assay.

My only reservations concerning this protocol are with the numbers of replicate flasks and plates used. It is not clear how many replicates and doses are used in the actual test as compared with the cytotoxicity estimation testing which is well described. "Doses of the test substance that give cell survivals approximately 100, 50 and 10% survival relative to the control cell survival are used." indicates that only three doses are used. Since Dimethoate is suspected of being a mutagen, we feel it would be prudent to use more dose levels. Similarly, the number of flasks treated is not well specified. At least two treatment flasks per dose would allow better analysis of the results.

William R. Schneider, Ph.D. 3/18/83
Toxicology Branch
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