Monsanto INDUSTRIAL CHEMICALS CO.

FROM (NAME & LOCATION) W. M. Mees - T2F

DATE September 22, 1972

SUBJECT

REFERENCE

cc W. R. Richard - T3A
R. E. Keller - T1B
E. P. Wheeler/G. J. Levinskas - A2SA
R. H. Munch - T1B
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TO : W. B. Papageorge
B2NK

In view of the reaction of the Interdepartmental Task Force on PCBs to the MICC progress report we feel studies demonstrating the differences between Aroclor 1016 and Aroclor 1242 are of prime importance. One definite area of concern is the tissue residue work. The toxicity/residue studies, carried out to date, have not shown any significant differences in the rate of accumulation and dissipation of PCB residues in animals fed Aroclor 1016 and Aroclor 1242. In our opinion, we would have a better chance of showing differences if a residue study were designed specifically for this purpose.

Thus, we would propose that a 120 day feeding study with a 120 day recovery period be carried out with rats.

Animals would be sacrificed at 30, 60, 90, 120, 150, 180, 210 and 240 days. This would allow the comparison of the rate at which residues from the two products build up and wash out in the test animals. The Aroclor 1016 and Aroclor 1242 oral exposure levels should be 0.5, 5, and 50 ppm. Five tissues; muscle, liver, kidney, fat and brain from each sex should be retained for residue analysis. A minimum of five animals/test group/sex/sacrifice should be composited to assure sufficient tissue for residue analysis. Corresponding tissue samples from a common central group should be included at each sacrifice.

The outlined residue study (no toxicity data) would involve a minimum of 560 animals. Dr. Paul Wright of Bio-Test has estimated the cost of feeding, housing, and sacrificing the animals to be between $5,000 and $7,000. A maximum of 560 samples for residue analysis are involved. The analytical cost per sample is estimated at $40 - $60.

To keep the costs to a minimum, we suggest the analysis be carried in a stepwise fashion. Initially, only the 56 male fat samples would be analyzed at a minimum total (feeding and analysis) cost of $8,000 - $9,000. Upon completion of the initial step and hopefully the observation of significant differences between the materials, a decision regarding the value of analyzing the remaining samples can be made.

In summary, we feel MICC's interests are best served by continued cooperation with the government regulatory agencies. More specifically, we should make every effort to keep these agencies aware of the facts concerning environmental improvements in our products.

W. M. Mees

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