MONSANTO INDUSTRIAL CHEMICALS COMPANY

FROM (NAME & LOCATION): J. P. Mieure/E. S. Tucker - S. Second Street - St. Louis

DATE: October 18, 1971

SUBJECT: ANALYSIS OF POLYCHLORINATED BIPHENYL PRODUCTS FROM CHLORINATED DIBENZOFURANS

REFERENCE:

TO: W. R. Richard
General Offices

cc: J. Mason - GO
H. S. Bergen - GO
W. B. Papageorge - GO
E. P. Wheeler - GO
R. E. Keller - Res. 1
M. W. Dietrich - Res. 2
R. H. Munch - Res. 2

Per your recent request, analysis of polychlorinated biphenyl products for chlorinated dibenzofurans has been completed. The products analyzed were MCS 1016, Kaneclor KC-300, Prodelec Phenoclor DP-6, and Bayer Clophen A-60. No chlorinated dibenzofurans were detected in MCS 1016 or Kaneclor KC-300. The lower detection limit was about 2 ppm. Tetra and pentachlorodibenzofuran were detected in both the Bayer and Prodelec products.

These results confirm the previous work in our laboratories and the original work reported by J. G. Vos, et al, at the University of Utrecht.

Based on our experience to date, we do not feel that it is necessary at this time to analyze the PCB products being tested by Industrial Bio-Test Laboratories. If unusual results are noted in the future, the materials can be analyzed at that time.

We currently have no reliable method for analyzing for low levels of chlorinated dibenzofurans in polychlorinated terphenyl products. The most sensitive test will probably be the biological response of the test animals.

Sample identifications are as follows:

MCS 1016	- Lot KA-708
KC-300	- Shizuki, July 1970
Phenoclor DP-6	- No identification
Clophen A-60	- 931134 received by Monsanto in 1967

Spectroscopy Method 70-23 was used for the analyses. MS file 71-100.

J. P. Mieure

E. S. Tucker

db

MONS 201022

Monsanto INDUSTRIAL CHEMICALS COMPANY

FROM (NAME & LOCATION) R. E. Keller - S. Second Street - St. Louis

DATE October 28, 1971

SUBJECT REPORT ON ALLEGED DIOXINS AND BENZOFURANS IN PCB'S

REFERENCE HSB 10-22-71 Memo to REK/WRR

TO H. S. Bergen
General Offices

cc W. B. Papageorge - GO
P. S. Park - GO
J. Mason - GO
E. P. Wheeler - GO
W. R. Richard - GO
C. W. Roos/T. M. Patrick - Res. 1
M. W. Dietrich/J. P. Mieure
/E. S. Tucker - Res. 2

Inputs are being developed for the subject report.

Your reference memo cites the following from Food and Chemical News.

> "FDA's Mildred Porter described work with a method that separated three chlorodioxins, including the highly toxic 2,3,7-Trichlorodibenzo-p-dioxin, from polychlorinated biphenyls detected in fish and wildlife."

I have since talked with Mrs. Porter to put the above in better perspective. Her work has dealt only with analytical method development with known mixtures of di, tri and tetrachlorodibenzo-p-dioxins and PCB's. She has done no work on the determination of dioxin residues in fish or wildlife nor is such work planned. She is not aware of work being planned by others. The objective of her study was to determine if dioxins would be found with PCB methodology being used by the FDA. Upon finding that PCB's and dioxins chromatograph together, she extended to technique to separate dioxins. It was thought that someone might find such a procedure useful in the future.

Mrs. Porter has since terminated this project. She emphasized that the procedure is really more a technique than a finished method. She agreed to send me a rough manuscript of the paper she presented at the October 11-14 national meeting of the AOAC in Washington. The above quote was taken from this presentation. The paper will appear in the November issue of JOAC.

REK

R. E. Keller

db