Pomeranty: 5/20

CDBF in PCB

not purposely produced like CDD

~~[illegible]~~

3,4,5 cl ¢OH ≡ DBF

↳ 74 Dow 6,7,8 DBF 30-80 ppm in commercial penta

74- DBF 7,8 in HCD

toxicity data limited

dermal toxicity in rabbit ear

salmon, chickens

angiogenic induction (prelim)

135 structures

MONS 214397

in PCBs

Voss 1970 → 60% Cl ated
chick bioassay
det limit 1 ppm Cl5

FDA Kawaler 400-
DECT 74 - details
12, 338
→ Cl NAPTH

Cl4 DBF exte 1ppm

Aroclors 1973
1221 — 0 1016 - 2 DBF
1242 - 2,3,4 DBF
1254 - 4,5 DBF
di though penta

known 2,3,4 used as ref.
assumed equal recoveries

Bowes → CDBF found earlier
to be published

GC of DBF's

more polar separate better

→ choice SICAR 10 C (APOLAR 10 C)

referred to Dieldrin

	T_R
2468	,75
1278	1.27
2368	1.97
2378	2.04
(24	0,35
37	0,33)

[redacted]

separation is prohibited

DBF ≠ CDD in toxicity

but no data

!! no Aroclor # data

" " chromatograms

" toxicity # data

Monsanto INDUSTRIAL CHEMICALS CO.

FROM NAME & LOCATION R. G. Kaley, II - T2F

DATE May 27, 1975

CC J. P. Mieure - T2F

SUBJECT 5TH ANNUAL SYMPOSIUM ON RECENT ADVANCES IN THE ANALYTICAL CHEMISTRY OF POLLUTANTS

REFERENCE

TO R. E. Keller
TIB

TRIP REPORT

The 5th Annual Symposium on Recent Advances in the Analytical Chemistry of Pollutants was held from May 19 through May 21 at Jekyll Island, Georgia. Twenty-one technical papers and three plenary lectures were presented.

Most of the technical papers were survey papers of various spectroscopic techniques of limited interest to Applied Sciences. The techniques included neutron activation, X-ray and UV photoelectron spectroscopy, ESCA, spark source MS, and GC-IR using Fourier transform.

The paper of most interest to Applied Sciences was that presented by I. H. Pomerantz of FDA on Analytical Studies of Chlorinated Dibenzofurans. After a brief history of the occurrence of DBF in various products, he showed data of the DBF homologs found in Aroclors.

Aroclor	DBF by Cl #
1221	0
1016	2
1242	2,3,4
1254	4,5

He stated that the DBFs occur at one to several ppm, but showed no numerical data. Further, he indicated preliminary toxicity data for DBFs are like those for CDDs, but again showed no data. Lastly he showed no actual chromatograms of Aroclor solutions containing DBFs although the thrust of his paper was the analytical detection and measurement of the DBFs in Aroclor fluid. His conclusion that DBFs are best separated on polar columns has been known to us for some time.

Several papers of potential interest to Applied Sciences were disappointing. L. B. Rogers' paper on improvements in LC was primarily a review of not so recent developments. His one notable point was that one should remember that one can increase S/N by decreasing noise. Improved temperature control of LC instruments, including control of column, detector and solvent temperatures would, for instance, give much better retention time reproducibility.

It appears that Monsanto and Applied Sciences are certainly current with regard to environmental compatability technology, based on the level of the papers presented and personal conversations.

Overall, I was disappointed in that I expected more technical and less survey-type papers. However, I feel that this conference is important enough that it should remain as a "must-coverage" meeting every other year. (It is held in a foreign country every second year.) The participants were a nearly equal mix of industrial, governmental, and academic scientists, so that inter-area contacts are readily established.

Robert D. Kaley, II

R. G. Kaley, II

db

MONS 214401