Comments on P.C.B's
Made at A.C.S/C.I.C.Meeting
Toronto - May 1970

22nd July 1970

1. Bitman (U.S.D.A, Beltsville Md).

Studied estrogenic activity of D.D.T analogues
Found that P.C.B's containing up to 40% chlorine showed some estrogenic activity.

2. Enos (Perrins Primate Research Lab).

Studied the use of U.V . irradiation at 2537 A° as a means of confirming G.L.C findings, i.e. G.L.C. measurements before and after irradiation.

Solutions of P.C.B's in iso-octane were irradiated at 2537A° for 20-30 min then examined by G.L.C. No peaks given.
Enos suggested that P.C.B's had been destroyed but in fact this ev idence only indicates that the compounds are no longer capable of being gas chromatographed. Probable mechanism is one of free radical formation + polymerisation.

3. Lincoln Reynolds

(a). Against nitration as a means of separating D.D.E and P.C.B's.

(b). Uses a technique based on clean up on a florisil column plus elution with hexane. Cannot separate P.C.B's from D.D.E, aldrin and heptqchlor.

(c). P.C.B. pattern in wildlife samples rather more like Aroclor 1260 than Aroclor 1254.

(d). Uses a G.L.C system of QF1/SE30 on Chromasorb W and obtains 14 peaks for Aroclor 1254.

(e). Semi quantitative method based on comparing areas of peaks 8 and 10 in standard and sample.

4. Biros(Perrine Primate Research Lab)

Discussed use of G.C.M.S in residue analysis.
Reported that Arocolor 1260 contains the decachloro ion.

5. Grant (F.D.D.Ottawa)

Discussed 60Co gamma irradiation of P.C.B's
Aroclor 1254 gave a 9 peak mixture with his G.L.C. system.
After irradiation peaks 1-3 had increased while peaks 4-9 decreased.
Final peak area was ~ 75% of original.

MONS 034600

G.M.Telling.

GMT/FMW.