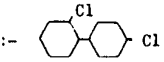
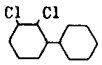
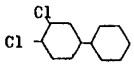
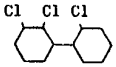
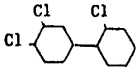
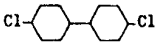
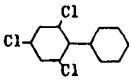
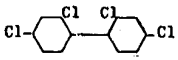
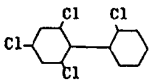
Biodegradation (Cont'd.)

Objective	Status
Assess the degradation by C2 of individual PCB isomers.	Degradable:-      Not degradable:-    
To confirm hypothesis defining which isomers will degrade, by synthesising key isomers and studying thoir degradation by C_2.	Key hexa- and penta-dichlorinated biphenyls synthesised. Initial tests failed to show degradation. Further work in hand to attempt to produce degradation by improvement in technique (31/8/7

Biodegradation (Cont'd.)

Objective	Status
Assess the effect of biodegradation of MCS 717 and MCS 762 by C_2.	Short term results due 31/8/70. Longer term residue determination will be made if initial results are encouraging.
To compare GLC chromatograms for wild-life extracts - e.g. fish, bird, with degraded Aroclor residues.	Wild-life specimens not yet examined at Ruabon. Arrangement with Ministry of Agriculture Lab. to exchange results on fish samples not yet effective. Target 31/12/70.
To assess degradation of HB40 by C_2.	Exposed sample awaiting analysis - due 31/8/70. Other cultures may need to be examined if C_2 is not successful.
To elucidate degradation pathways and select cultures specifically for degrading chlorinated biphenyls.	Bangor University Project Student selected for starting on 1/9/70. Target 31/8/71.
To assess effectiveness and provide analytical back-up on interesting cultures selected at Bangor.	Culture selected at Bangor as active on Aroclors 1242 and 1254 (C_3) has so far failed to show degradation of Aroclor 1242 in tests at Ruabon. Continuing.
To assess biodegradation of potential Aroclor replacements using appropriate cultures.	Some chlorinated diphenyl ethers (ex St. 1 are awaiting biodegradation tests. Priori has not yet been allocated to this product.
To assess the biodegradation of chlorinated terphenyls, particularly of those recommended as PCB replacements.	Analytical problem being considered. Continuing 1971.
To examine alternative degradation processes - e.g. ultra-violet irradiation, and relate to environmental conditions.	Preliminary look at U.V. irradiation of Aroclor 1242 indicated substantial decay of major peaks in chromatogram.