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Jensen (5) in Sweden reported their presence in wildlife tissues about two years ago.

The PCB's and related compounds (although in the rest of this paper reference will be made to the PCB's only, the other related compounds are also quite important) have very numerous and important industrial uses, but are not used as pesticides. Because of their similarities in structure and properties to the DDT pesticide group, the PCB's, if present, are carried through the usual pesticide extraction and screening procedures, and since they possess electron absorbing properties, will interfere with gas liquid chromatographic electron capture (GLC-EC) analysis of the organochlorine compounds.

Before any discussion of the type of interference encountered it would be appropriate to mention briefly some of the properties and uses of the PCB's.

They are produced and marketed under a number of commercial trade names e.g. 'Aroclor', 'Clophen A50', etc. The PCB's are available as liquids, resins, or solids; insoluble in water; thermoplastic; non-drying; stable on long heating at 150°C.; electrically non-conducting; not affected by boiling with NaOH solution; do not support combustion when alone above 360°C.; are easily soluble in most common organic solvents and drying oils.

They are used in protective coatings, as plasticizers and extenders, as sealers in water-proofing compounds and putty, in asphaltic materials, printing inks, waxes, and synthetic

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adhesives.

Liquid PCB's are used as dielectrics, as hydraulic fluids, in thermostats, in cutting oils, as extreme pressure lubricants, as grinding fluids, and as heat transfer media.

Solid PCB's are used to impregnate carbon resistors, as sealers or impregnating agents for electrical apparatus.

Obviously, the stability of these compounds makes them extremely useful and versatile for a great number of applications. Considering their stability - not affected by boiling with NaOH or nitric acid, not metabolized in living organisms, and nonflammable if containing more than four chlorine groups, it is as Jensen (6) pointed out, difficult to explain how these compounds find their way into living organisms.

However, with the numerous applications, it is not inconceivable that fish and other wildlife could be polluted as a result of the flushing of wastes into rivers, lakes, etc. It is also possible that contamination could proceed via the atmosphere when wastes containing these compounds are burnt.

However, a third and more likely source is the possibility that some companies might be using PCB's in pesticide formulation to increase the kill-life of insecticides. The Monsanto Company, which manufactures the Aroclors, stated back in 1965 (7) that the Aroclors can "trap" and hold more volatile ingredients making volatile insecticides and repellents last longer in residual activity. The most pronounced effect for increasing the

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