ABSTRACT

The catalytic degradation of polychlorinated biphenyls (PCBs) and the determination of the levels of PCBs in some urban an rural areas of Jamaica

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Extensive investigation of the catalytic degradation of polychlorinated biphenyls (PCBs) was carried out in solution using some peroxo complexes of chromium (iv) and iron complexes in conjunction with hydrogen peroxide. The change in concentration of PCBs was measured by using a gas chromatograph attached to an electron capture detector. A mass spectrophotometric detector was also used. The results obtained are discussed.

Studies were also done to ascertain the levels of PCBs in soil, water and sediments in some urban and rural areas of Jamaica. All the soil samples collected contained less than 10 ppm PCB and PCB was found only in soil samples which were collected from sites where transformers were stored or are in use. The mean concentrations of PCBs in the urban and rural soil samples were 0.7 and 0.2 mg/kg respectively with over 80% of the samples containing less than 2.0 mg/kg. The median concentration

for the urban soil samples was 1.4 mg/kg while that for the rural was less than 0.1 mg/kg.