

**Thesis Title**            Some Organochlorine Pesticide Residues in Fishes Shrimps  
   and Meats in Chiang Mai Markets

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### ABSTRACT

Samples to be analyzed for organochlorine pesticide residues were collected during the eight months period from April to November, 1993. Chicken meat, beef, pork meat and pork fat as well as some fish and giant fresh water prawns were purchased from markets in Chiang Mai. Some fish were also collected from Mae Ping River. All the samples collected were weighed and kept at -20 °C in a freezer until the analysis was carried out. Pesticides were extracted from samples using dichloromethane. Sample clean-up was carried out by a column packed with Florisil. Qualitative and quantitative analyses were performed on gas chromatograph equipped with an electron-capture detection system, using a borosilicate glass column, 2.6 m × 3.0 mm i.d., packed with 1.5 % SP 2250/1.95 % SP 2401 on 100/200 mesh Supelcoport. The analyses were carried out under conditions of 260 °C injection and detector temperature, 210 °C oven temperature and 80 ml/min nitrogen carrier gas flow rate. Organochlorine pesticide residues were detected in all the samples. The residue levels on a fresh weight basis were found to be in the range of 0.7 ~ 26 ng/g for  $\Sigma$ DDT, 0.5 ~ 7.9 ng/g for  $\Sigma$ HCH and from not detected up to 6.6 ng/g for dieldrin. However, the residue level of HCB was very low in all the samples. These pesticide residue levels were all found to be lower than the maximum residue limits recommended by WHO and Thailand's Ministry of Public Health. According to food consuming habit of Thai people, The calculated intake of organochlorine residues from fish and meats was much lower than WHO's acceptable daily intake. But from the overall data obtained, consuming the fish caught from Mae Ping River should be avoided for higher fish consuming groups and pregnant women.

