

## Heavy Metal Concentration in Orchard Area, Amphawa District, Samut Songkram Province, Thailand

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**Abstract :** A study was conducted in May to July 2013 with the aim of determination of heavy metal concentration in orchard area. 60 samples were collected and analyzed for Cadmium (Cd), Copper (Cu), Lead (Pb), and Zinc (Zn) by Atomic Absorption Spectrophotometer (AAS). The heavy metal concentrations in sediment of orchards, that use chemical for Cd ( $1.13 \pm 0.26$  mg/l), Cu ( $8.00 \pm 1.05$  mg/l), Pb ( $13.16 \pm 2.01$ ) and Zn ( $37.41 \pm 3.20$  mg/l). The heavy metal concentrations in sediment of the orchards, that do not use chemical for Cd ( $1.28 \pm 0.50$  mg/l), Cu ( $7.60 \pm 1.20$  mg/l), Pb ( $29.87 \pm 4.88$ ) and Zn ( $21.79 \pm 2.98$  mg/l). Statistical analysis between heavy metal in sediment from the orchard, that use chemical and the orchard, that not use chemical were difference statistic significant of 0.5 level of significant for Cd and Pb while no statistically difference for Cu and Zn.

**Keywords :** heavy metal, orchard, pollution and monitoring, sediment

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