

**ANALISIS KEMAMPUAN ADSORPSI  
TANAH JENIS LEMPUNG (*LOAM*) TERHADAP  
TEMBAGA SEBAGAI BAHAN AKTIF PESTISIDA  
PADA LAPANGAN GOLF**

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***ABSTRACT***

*The used of pesticide contains copper (II) as an activated material on a golf field can cause ground water pollution. Copper as the largest composition on the activated material in pesticide is a toxic and hazardous compounds therefore this research is needed to find out the adsorption capability of soil with copper as contaminant. The research is done in a laboratory scale with two (2) phases which is, batch and continues columns. Batch experiment is to analyse adsorption capability of soil with copper as contaminant in a static condition. Freundlich and Langmuir isotherm is used to process the data. Continues columns is used to measure soils's adsorption capability on copper in a dynamic condition by using piled-up soil. This experiment is done on varies of debits and influent concentration. Adsorption capabilty of soil in the batch experiment will follow the Freundlich equation, while continues columns will follow the Thomas equation. The research shows that clay soil (loam) on the Candi Semarang Golf Club (CSGC) has a good capability in setting aside copper in the pesticide wich have removal efficiency of copper about 98,20% on the batch experiment and 98-100% on the continues columns. Continues columns experiment show that the optimum adsorption capacity is in condition of debits 40 ml/day and influent concentration 30 mg/l which is 37 days to get an exhaustion conditions. Besides that coefficient distribution ( $K_d$ ) of soil about 128,8 l/Kg and retardation factor about 5,88. The conclusion is there is a very small possibility that the ground water will be contaminated by copper as the active material in pesticide.*

*Key word: adsorption, soil, copper.*