

Cherdpong Liawpatanapong 2008: Adsorption of Phenol and its Derivatives in Solution by Sludge from Constructed Wetland of The King's Royally Initiated Laem Phak Bia Environmental Research and Developmental Project at Phetchaburi and Suphanburi Province. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Associate Professor Nipon Tungkananuruk, Ph.D. 112 pages.

The remained phenol after its adsorptive extraction from Laem Phak Bia project in Phetchaburi and Suphanburi province sludges powder can be determined by spectrophotometrically at 510 nm as quinoneimine. The effects of pH (3-8), shaking time or digestion time, contact time, initial concentration of phenol (50-500 mg/L) and amount of adsorbent (10-100 g/L) are reported. Langmuir and Freundlich models are used to correlate equilibrium data on sorption of phenol. It was found that the adsorption process of Phetchaburi and Suphanburi sludges powder are statistically significant fit for Freundlich and Langmuir models respectively. The system has been applied to removal phenol and its derivatives in wastewater from paper industries.

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Thesis Advisor's signature

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