

Itsara Tungsuwan 2008 : Adsorption of Phenol and its Derivatives in Solution by using *Scirpus grossus* L.f. and *Colocasia esculenta* Schott. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Associate Professor Nipon Tungkananuruk, Ph.D. 104 pages.

The remained phenol after its adsorptive extraction from *Scirpus grossus* L.f. and *Colocasia esculenta* SCHOTT powder can be determined by spectrophotometrically at 510 nm as quinoneimine. The effects of pH (4-8), shaking time or digestion time, contact time, initial concentration of phenol (50-250 mg/L) and amount of adsorbent (20-100 g/L) are reported. In addition, the adsorption process of *S. grossus* L.f. and *C. esculenta* SCHOTT powder are conformed with Langmuir and Freundlich models respectively. The system has been applied to the determination of phenol and its derivatives in wastewater from paper industries.

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