Sarocha Nooyoung 2009: Adsorption of Formaldehyde in Wastewater by *Typha angustifolia* Linn. Carbon and Soil Sediment. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Associate Professor Nipon Tungkananuruk, Ph.D. 89 pages.

The remained formaldehyde after adsorptive extraction by *Typha Angustifolia* Linn Carbon and soil sediment from the TOC glycol company limited can be determined by spectrophotometry at 575 nm. The effects of adsorption conditions involving pH (3-9), volume of buffer (60-180 ml/L)] rate of shaking (50-150 rpm), shaking time (10-120 min.), contact time (10-120 min.), concentration of formaldehyde (10-50 mg/L) and amount of adsorbents (10-60 g/L) were reported. In addition, the adsorption process of *Typha angustifolia* Linn Carbon and soil sediment were conformed with Freundlich and Langmuir sorption models, respectively. The system has been applied to the adsorption of formaldehyde in wastewater from ethylene oxide and ethylene glycol process by using batch experiment. The results shown that the formaldehyde adsorption percentage were 21.17 and 16.40, respectively. From continuous experiment by *Angustifolia* Linn Carbon adsorbent using flow rate at 20, 40, 60 and 80 ml/min were found that the best formaldehyde treatment efficiency at first hour percentage were 32.02, 18..85, 11.85 and 4.85, respectively. Furthermore, the no efficiency to remove suspended solid dissolved solid conductivity BOD and COD.

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