Kantiya Sodsai 2012: Dyes Removal from Doi Tung Development Project Textile Wastewater by *Hevea brasiliensis* and *Hevea brasiliensis* Charcoal. Master of Science (Environmental Science), Major Field: Environmental Science, College of Environment. Thesis Advisor: Associate Professor Nipon Tungkananuruk, Ph.D. 147 pages.

The dyes adsorption by *Hevea brasiliensis* and *Hevea brasiliensis* Charcoal was the one of alternative system that might be suitable and could remove the dyes from textile wastewater from Doi Tung Development Project. The extent of adsorption was studied as a function of pH value of solution, agitation rate, agitation time, contact time, concentration of standard dyes solution and adsorbent dosage. The results showed that the capacity of *Hevea brasiliensis* and *Hevea brasiliensis* Charcoal were different. The optimal conditions for dyes adsorption from 10 mg/L of standard dyes solution by *Hevea brasiliensis* 3 g were pH 2, agitation rate 50 rpm, agitation time 60 min and no contact time, whereas *Hevea brasiliensis* Charcoal 2 g were pH 2 , no agitation, contact time 10 min. Under these conditions, the average highest dyes removal efficiency of both adsorbents in standard dyes solution (nine dyes : 6% Super Black G, 2% Turquoise H-GN, 2% Yellow LS-4G, 2% Yellow LS-R-01, 2% Orange LS-BR, 4% Navy LS-G, 2% Red LS-B, 2% Blue LS-3R, 2% Br.Blue LS-G) were 73.85% and 80.03% respectively and in textile wastewater from Doi Tung Development Project were 68.08% and 70.98% respectively. The adsorption of dyes on both adsorbents demonstrated the conformity according to Langmuir isotherm equation. In addition, the COD, turbidity, oil and grease, total solids, suspended solids and total dissolved solids can be removed by two types of adsorbents.

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