Peerati Chinnarojborwonkul 2014: Effective of Domestic Wastewater Treatment by Utilisation of Extracted Tannin from Banana Peel of Kluai Nam-wa as Biocoagulant. Master of Science (Environmental Science), Major Field: Environmental Science, Department of Environmental Science. Thesis Advisor: Associate Professor Kanita Tungkananuruk, M.S. 83 pages.

The objective of this research was to study the effective of a tannin extracts from Kluai Nam-wa as a natural coagulant for domestic wastewater treatment. Tannin extraction from Kluai Nam-wa peels were carried out to determine the optimum condition. The concentration tannin solution was achieved with 30 min soaking of banana peel 10g in water 200 mL at 30 °C. Jar test experiments were conducted at various dosages of the tannin solution, pH and fast-slow speed of mixing and domestion wastewater from Phetchaburi. In addition, the large-scale (20 L) wastewater treatment by extracts from Kluai Nam-wa peel were conducted. The quality parameters of the treated water by using coagulation with tannin extracts was analyzed and compared with that of the water treatment with alum showed that no significant different between both of coagulants. Therefore, that tannin extracts from Kluai Nam-wa be used as a natural coagulant to alternative chemical coagulants for low-cost treatment of turbid waters.

## ลิขสิทธิ์ มหาวิทยาลัยเทษกรราสกร์