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DARUNEE CHANTAWITTAYA : DISTRIBUTION OF LAS IN THE LOWER CHAO PHRAYA RIVER THESIS ADVISOR : ASSIS.PROF.SUTHIRAK SUJARITTANONTA, Ph.D., 131 pp. ISBN 974-584-217-6

This study involves the distribution of LAS in the lower Chao Phraya River. Methylene blue active substance (MBAS) is adopted as method of analysis. Thirty water samples were taken from fifteen station located along the river and ten samples were taken from the mouth of the five main canals joinly to the river. The sampling program were carried out two times, namely, at high flow period (October,1994) and at low flow period (April, 1992). Domestic wastewaters were taken from 3 domestic wastewater treatment plants, two treatment plants located at Sammakorn settlement and the other one located at Huay Khwang housing estate. The results showed that concentration of LAS in the lower Chao Phraya River ranged from 0.000 to 0.032 and 0.000 to 0.072 mg/L, in October and in April, respectively. Statistically tested were performed to observe the difference in LAS concentration between low and high flow period and highly significanceat P=0.05 were obtained. LAS found in the canals ranged from 0.046 to.2.072 mg/L. The highest concentration was found in Phrakhanong canal whereas the lowest was found in Bangkokyai canal. LAS in raw domestic wastewater are in the range of 4.365 and 5.153 mg/L, in which, wastewater from Huay Khwang housing estate show the highest value. Population equivalent calculated from Summakorn municipal phase I and II are 1.22 and 1.10 g/cap.d, respectively. Efficiency in removing of LAS by bioreel and biodrum treatment plant in Summakorn municipal and activated sludge treatment plant in Huay Khwang municipal were 95.3%, 83.0% and 98.1%, respectively.