3937587 SCAI/M : MAJOR : APPLIED ANALYTICAL AND INORGANIC CHEMISTRY;
M.Sc. (APPLIED ANALYTICAL AND INORGANIC CHEMISTRY)
KEY WORDS : SOLID-PHASE EXTRACTION / HPLC / BREAKTHROUGH
RUCHAYA BOONYATUMANOND : DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN WATER SAMPLES BY USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. THESIS ADVISORS : PRAPIN WILAIRAT., Ph.D, JUWADEE SHIOWATANA, Ph.D ., 147 P. ISBN : 974-662-392-3

A method for determining polycyclic aromatic hydrocarbon (PAHs) by High Performance Liquid Chromatography (HPLC) was developed using programmable scanning fluorescence and diode array detection. Separation of 16 PAHs was achieved by using a gradient program. Preconcentration of sample using solid phase cartridge is required to determine PAHs at ppb level. Maximum loading volumes were measured for the breakthrough volumes of tap water and river water samples. The precision and reproducibility of the method were evaluated by using real samples spiked with standard PAHs. Detection limit range was less than 1 ng/l, for some of the PAHs, and up to 40 ng/l. Samples from various areas along the Chao Phraya river were analysed.