

Thesis Title : A Feasibility Study of Using Commercial
Grade Cation-exchange Resins for Paraquat
Content Analysis in Water

Name : Miss Kasinee Pitisaree

Degree : Master of Science (Environmental Health)

Thesis Supervisory : Assistant Prof. Sudhin Yoosook
Committee : B. Sc. (Hons.), M.S., D. Tech. Sc.
Assistant Prof. Krisana Teankaprasith
B. Sc., M.S. Environmental Sc.
Mr. Suphachai Sangrattanakul
B. Sc., M.S.P.H. (Bios.)

Date of Graduation : 21 November 1988

ABSTRACT

To date laboratory grade cation exchange resins i.e. Dowex 50 W or Zeo-Karb 225 are being used for the analyses of Paraquat in water by Ion-exchange Method. These resins are quite expensive and difficult to obtain ; thus , it is the intention of this study to investigate the feasibility of using commercial grade cation exchange resins for the purpose. Three commercial grade cation exchange resins: (1) Amberlite IR 120 Plus, (2) Kastel C 300 L and (3) Lewatit S 100 were selected for the experiment which was done at the range of paraquat concentrations in water between 0.1-5.0 mg/l. Results of the study indicated that Amberlite IR 120 Plus could be used in the place of the laboratory grade resins ($P > 0.05$) ; while the other two resins could not ($P < 0.01$).