

Performance of Phytogreen Zone for BOD5 and SS Removal for Refurbishment Conventional Oxidation Pond in an Integrated Phytogreen System

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Abstract : In this study, the effectiveness of integrated aquatic plants in phytogreen zone was studied and statistical analysis for the promotional integrated phytogreen system approached was discussed. It was found that the effectiveness of using aquatic plant such as *Typha angustifolia* sp., *Lepironia articulata* sp., *Limnocharis flava* sp., *Monochoria vaginalis* sp., *Pistia stratiotes* sp., and *Eichhornia crassipes* sp. in the conventional oxidation pond process in order to comply the standard A according to Malaysia Environmental Quality Act 1974 (Act 127); Environmental Quality (Sewage) Regulation 2009 for effluent discharge into inland water near the residential area was successfully shown. It was concluded that the integrated phytogreen system developed in this study has great potential for refurbishment wastewater in conventional oxidation pond.

Keywords : phytoremediation, integrated phytogreen system, sewage treatment plant, oxidation pond, aquatic plants

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