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Authors: Rosmawanie Mohd, Radin Mohamed, Adel Al-Gheethi, Fadzilla Pahazri, Amir Hashim, Shaylinda Mohd Zin

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ACCEPTED MANUSCRIPT

Sequestering of Pollutants from Public Market Wastewater using *Moringa oleifera* and *Cicer arietinum* Flocculants

Rosmawanie Mohd, Radin Mohamed*, Adel Al-Gheethi*, Fadzilla Pahazri, Amir Hashim, Shaylinda Mohd Zin

Micro-pollutant Research Centre (MPRC), Department of Water and Environmental Engineering, Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn Malaysia (UTHM), 86400 Parit Raja, BatuPahat, Johor, Malaysia

***Corresponding author** E mail: adel@uthm.edu.my; maya@uthm.edu.my;

Research highlight

- The use of *M. oleifera* resulted in the highest removal for BOD_5, COD and O&G from the public market wastewater
- Adsorption of COD by *M. oleifera* was fitted to both the Langmuir and Freundlich isotherms, while the Freundlich isotherm was the best model to study COD and O& G removal by *C. arietinum.*
- The natural coagulants are applicable for improving the quality of public market wastewater.

Abstract

The present study aimed to investigate potential of *Moringa oleifera* and *Cicer arietinum* seeds for the treatment of public market wastewater in comparison to Alum and $FeSO_4$. The flocculation process was assessed as a function of adsorbent dose (60-360 mg/L), pH (4 to 9) and mixing rate (50 to 300 rpm). The adsorption study was performed to find out the removal of biological oxygen demand (BOD_5), chemical oxygen demand (COD), total suspended solids

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