利用廢棄魚鱗取代活性碳作為去除染整廢水色度之吸附劑可行性研究

蔡宗穎、吳建一

E-mail: 9806224@mail.dyu.edu.tw

摘 要

吳郭魚為台灣常見重要魚種，廢棄魚鱗每年產量大約高達九萬噸左右。因此，促使了由工業或漁業產物的殘餘物中獲得以魚鱗作為吸附劑。本研究以吳郭魚魚鱗作為吸附劑來去除Reactive Red 198（R-R 198）水溶液之染料。另外，我們將探討吳郭魚魚鱗其界達電位（zeta potential）、不同染料去除色度和吸附染料之全波長，並且在魚鱗去除色度中來研究pH值、溫度和吸附劑量之影響，而以動力學研究來解析染料去除。此結果顯示染料去除百分比會隨著初始染料濃度的降低而增加，且隨著吸附劑使用量的增加而增加。此外，等溫吸附模式藉由Freundlich、Dubnin-Radushkevich、Langmuir、Temkin和Redlich-Peterson等溫線方程式來使用其相關係數，並分析五種不同誤差函數。結果發現Langmuir方程式為最適合代表染料R-R198來吸附吳郭魚魚鱗之平衡數據。

關鍵詞 : 魚鱗、染料、吸附劑、色度去除、動力學

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