Ion Fe2 Decrease With Variation of Mahogany Wood Sawdrop Concentration (Swietenia macrophylla King) And Long Soaking

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ABSTRACT

The purpose of this research is to study the decrease of Fe2 + level using the variation of concentration of Mahogany Wood Sawdle and long time immersion. The research was done in Chemical Laboratory of Faculty of Nursing and Health of Muhammadiyah University of Semarang. The research time was conducted in May 2016. The research sample using standard solution of Fe2 + with 50 ppm concentration was done soaking using Mahogany Wood Sawdust with variation of concentration (3% w / v, 6% w / v, 9% w / v, 12% w / v) and immersion time (1) hour, 2 hours, 3 hours, 4 hours). The results of the experiment showed that optimum time decreased Fe2 + content was 4 hours at concentration of Mahogany Wood Sawdust (3% w / v, 6% w / v, 9% b / v, 12% w / v) respectively can decrease the Fe 2 + level by 93.97%, 94.70%, 95.80, 97.66%. Adsorption capacity of Mahogany Wood Sawmill on Fe2 + content in 1 hour time variation and 3% w / v Mahogany Wood Sawdrop concentration was 1.476 mg / g Variation of concentration and duration of submersion The most optimum Mahogany Wood Sawdust decreased Fe2 + level was 12% w / v for 4 hours can reduce Fe2 + level as much as 97,66%. The optimum adsorption capacity of Mahogany Wood Sawdle to decrease of Fe2 + concentration is 3% w / v concentration and 1 hour soaking time is 1,476 mg / g.

Keywords: Fe2 +, Mahogany Wood Sawdough, Concentration Variation, Adsorption Capacity.