

PENGARUH PERENDAMAN PASIR MALELO DENGAN HNO₃ TERHADAP EFISIENSI PENJERAPAN KROMIUM

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Abstract

The objective of this study was to investigate the effect of soaking nitrate acid of Malelo sand to adsorption efficiency of chromium (Cr). The Malelo sand was prepared by soaking in nitric acid with variation of concentration were 17.5, 35 and 70% for 24 hours at room temperature. The adsorption efficiency of chromium was determined based on concentration of chromium residue after adsorption, which measured using Atomic Absorption Spectrophotometer (AAS). The characterization of Malelo sand determined using FTIR and XRD. The result indicated that the mean of adsorption efficiency of chromium on Malelo sand without preparation and soaking in nitrate acid with variation concentration 17.5, 35 and 70% were 91.36, 92.40, 92.72 and 94.004% respectively.

Key words: soaking, Malelo sand, nitrate acid, efficiency of adsorption, and Chromium

PENDAHULUAN

Dewasa ini kontaminan logam berat di lingkungan menjadi permasalahan besar karena keberadaannya di tanah, air dan udara semakin meningkat sejalan dengan meningkatnya kegiatan-kegiatan industri seperti pertambangan minyak, emas, batubara, pembangkit tenaga listrik, peleburan logam, pabrik pupuk dan industri lainnya. Kromium (Cr) merupakan salah satu dari 14 (empat belas) logam berat yang paling berbahaya. Tingkat oksidasi

