PENURUNAN KADAR METILEN BLUE DENGAN ZEOLIT ZSM-5 KOMERSIAL PADA SUHU 55ºC BERDASARKAN VARIASI KONSENTRASI AWAL METILEN BLUE

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ABSTRAK

Metilen blue merupakan salah satu zat warna tekstil yang banyak digunakan Zat warna metilen blue dalam lingkungan perairan dapat merusak berbagai spesies mahluk hidup. *Metilen blue* merupakan bahan kimia yang memiliki potensi bahaya terhadap kesehatan tubuh manusia.salah satu material yang digunakan sebagai absorben penyerapan zat warna adalah zeolit-5 ZSM komersial tujuan penelitian untuk mengetahui penurunan kadar metilen blue mengunakan zeolit-5 ZSM komersial berdasarkan variasi konsentrasi dan lama perendaman. Sampel penelitian adalah larutan baku metilen blue 1000 ppm kemudian dilakukan perendaman mengunakan zeolit zsm-5 komersial dengan variasi konsentrasi (10,25,50,100,200,400,600,800,1000) dan waktu perendaman (6 jam).hasil penelitian diperoleh kadar metilen blue. Hasil penelitian diperoleh penurunan kadar metilen blue tertingi sebesar 54,05 diperoleh dengan penambahan zeolit zsm-5 komersial 0,1% dalam waktu perendaman 6 jam.

Kata kunci: Metilen blue (MB), Zeolit zsm-5 komersial, Variasi konsentrasi, Lama perendaman

DECREASED LEVELS OF METHYLENE BLUE WITH ZEOLITE ZSM-5 COMMERCIAL AT TEMPERATURE OF 55 ° C BASED ON THE VARIATIONS OF THE INITIAL CONCENTRATION OF METHYLENE BLUE

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ABSTRACK

Methylene blue is one of the most widely used textile dyes. Methylene blue dyes in aquatic environments can damage various species of living things. Methylene blue is a chemical that has the potential harm to human health. one of the materials used as absorbent of dyestuff absorption is commercial zeolite-5 ZSM. The purpose of the study was to determine the decrease in methylene blue using commercial zeolite-5 ZSM based on variations in concentration and soaking time. The research sample was 1000 ppm of methylene blue standard solution then immersed using commercial zsm-5 zeolite with various concentrations (10, 25, 50, 100, 200, 400, 600, 800, 1000) . Obtained levels of methylene blue. The results showed that the highest reduction of methylene blue content of 54.05 was obtained by the addition of commercial zsm-5 zeolite 0.1% in a 6 hour immersion time.

Keywords: *Methylene blue (MB), zeolite ZSM-5 commercial, Variation concentration, soaking time*