

**OPTIMALISASI TRANSPOR ZAT WARNA METILEN BIRU MELALUI
KLOOROFORM DENGAN TEKNIK MEMBRAN CAIR FASA RUAH
OLEH PEMBAWA ASAM BENZOAT**

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ABSTRACT

OPTIMALIZATION TRANSPORT OF METHYLENE BLUE DYES THROUGH CHLOROFORM WITH BULK LIQUID MEMBRANE USING BENZOIC ACID AS CARRIER

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Methylene blue dyes transport had been researched through bulk liquid membrane with benzoic acid as carrier which consist of 6 mL methylene blue solution as a source phase, 12 mL H_2SO_4 0.05 M solution as an acceptor phase and 30 mL of benzoic acid in chloroform as a membrane phase. The experiment operation technique was assisted by magnetic stirrer mixing at 183 rpm within 15 minutes equilibrium time. The content of methylene blue in source phase and acceptor phase was determined by UV-Visible Spectrophotometer at 664 nm of λ maxs and leakage of membrane was determine with FTIR. From the result, it can be concluded that the optimum condition of transport was 1.4×10^{-4} M methylene blue with pH in source phase was 10, sulfuric acid 0.05 M (H_2SO_4) as acceptor phase, carrier (benzoic acid) concentration was 0.5 M and the optimum transport time was 180 minutes. In this condition the percentage transport of methylene blue in acceptor phase was 73.57% and the remaining percentage in the source phase was 2.63%.

The result from FTIR (Fourier Transform Infrared Spectroscopy) characterization indicate that the membrane phase was leak, that indicated by benzoic acid as carrier was found in source phase and in acceptor phase.

Keywords : Transport, Methylene Blue, Benzoic Acid, Carrier, Bulk Liquid Membrane