

DEGRADASI SENYAWA PARAQUAT DALAM PESTISIDA GRAMOXONE® SECARA SONOZOLISIS DENGAN PENAMBAHAN TiO₂-ANATASE

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ABSTRACT

Degradation of Paraquat compound in Gramoxone pesticide had been done by sonolysis, ozonolysis, and sonozolysis. Sonolysis methods were performed using an ultrasound VC-1, ozonolysis using a bio-ozone space age sterilizer, and sonozolysis by combining sonolysis and ozonolysis methods. The optimum condition for degradation of 4 mg/L paraquat by sonolysis was found at temperature $40\pm1^{\circ}\text{C}$. Percentage of degradation at optimum condition was 22.80% with 90 minutes treatment. Whereas, with using ozonolysis method percentage of degradation of paraquat 4 mg/L was 50.39% with 60 minutes treatment. The combination of sonolysis and ozonolysis method simultaneously, these so-called sonozolysis, for degradation of the same compound, extend the percentage of degradation to 45.87% with only 30 minutes treatment.

Keywords: Paraquat, Sonolysis, Ozonolysis

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