

DEGRADASI ZAT WARNA SUDAN I SECARA SONOLISIS DAN FOTOLISIS DENGAN PENAMBAHAN TiO₂-ANATASE

Safni^{1,3}, Umiati Loekman¹, Fitra Febrianti¹, Maizatrisna¹, Tadao Sakai²

¹*Jurusan Kimia FMIPA Universitas Andalas, Padang*

²*Department of Chemistry, Aichi Institute of Technology Toyota City, Japan*

³email : safni@yahoo.com

ABSTRACT

Degradation of Sudan I dye had been done with sonolysis and photolysis by adding anatase-TiO₂. Sonolysis method were performed using an ultrasound with frequency of 45 kHz. Photolysis method were performed using an irradiation of UV light with $\lambda = 359$ nm. Degradation of 4 mg/L Sudan I with addition of 0.1000 g anatase-TiO₂ at pH = 7.0, temperature $25 \pm 1^\circ\text{C}$, percentage of degradation 64.04% within 180 minutes sonolysis. Degradation of 4 mg/L Sudan I using photolysis with addition of 0.1000 g anatase-TiO₂ at pH = 7.0 and percentage of degradation 100% within 180 minutes photolysis. Degradation of 4 mg/L Sudan I using sonolysis and photolysis simultaneously with addition of 0.1000 g anatase-TiO₂ at pH = 7.0 and percentage of degradation 94.04% within 180 minutes treatment.

Keywords : degradation, sonolysis, photolysis, Sudan I, anatase-TiO₂.

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