DEGRADASI SENYAWA PERMETRINDENGAN MENGGUNAKAN TiO$_2$-Anatase DAN ZEOLIT ALAM SECARA SONOLISIS

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ABSTRACT

The research about the degradation of permethryn compound had been done by sonolysis method using anatase-TiO$_2$ and natural zeolite (mordenit kinds) as catalysts. Permethryn is one of synthetic pyretroid pesticides that low toxicity for mamals but it is high toxicity for fishes, insects and water microorganisms. Sonolysis method is conducted by using ultrasonic wave at frequency 45 kHz. The results show that sonolysis method without the addition of anatase-TiO$_2$ and zeolite on optimum temperature at 40°C during 120 minutes treatments could be degrade 20 mg/L permethryn until 22.23%. In other hands, the degradation of 20 mg/L permethryn in the same condition with adding 0.002 g anatase-TiO$_2$ achieved 44.95% but for using 0.2 g zeolite could be degrade 52.34%.

Keywords: degradation, permethrin, TiO$_2$-anatase, sonolysis, zeolite

DAFTAR PUSTAKA
