

Degradasi Limbah Cair Sefadroksil Sintetik Dengan Perokson Sebagai Oksidator Pada Advanced Oxidation Processes (AOPs) = Degradation Of Synthetic Cefadroxil Using Peroxone As Oxidizer An Advanced Oxidation Processes (AOPs)

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Abstrak

Penelitian ini bertujuan untuk memperbaiki kualitas limbah sefadroksil dengan menggunakan proses perokson, yaitu suatu proses AOPs yang menggabungkan ozon yang berfase gas dan hidrogen peroksida yang berfase cair sebagai oksidator. Ozon yang digunakan berasal dari ozonator yang mampu menghasilkan ozon pada fase cair dan gas-cair kemudian langsung dicampurkan dengan H₂O₂. Variasi yang digunakan untuk melakukan uji kinerja proses perokson ini adalah rasio ozon terhadap hidrogen peroksida. Dari penelitian ini menghasilkan kondisi terbaik untuk degradasi limbah cair sefadroksil sintetik, yaitu ozon dengan rasio hidrogen peroksida sebesar 1;0,5. Persentase degradasi yang dihasilkan mencapai 86,04% dengan konsentrasi akhir 6,98 ppm dan ozon, reaktor hibrida ozon-plasma, dan rasio hidrogen peroksida sebesar 1:0,5. Persentase degradasi yang dihasilkan mencapai 82,12% dengan konsentrasi akhir 8,94 ppm.The aim of this research is to improve the quality of cefadroxil wastewater using peroxone process, an AOPs which combines ozone and hydrogen peroxide as an oxidizer. Ozone came from ozonator which capable of producing ozone in the liquid phase and gas-liquid then mixed with H₂O₂. Variation of variables used are ratio of ozone to hydrogen peroxide. From this research, produced the best conditions for the degradation of synthetic wastewater cefadroxil are ozone with hydrogen peroxide ratio of 1:0.5. The result degradation percentage reached 86,04% with a final concentration of 6,98 ppm and combine of ozone, hybrid plasma ozone reactor and hydrogen peroxide ratio of 1:0.5. The result degradation percentage reached 82,12% with a final concentration of 8,94 ppm.;The aim of this research is to improve the quality of cefadroxil wastewater

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