ABSTRAK

DEGRADASI ELEKTROKIMIA KUNING METANIL MENGGUNAKAN ELEKTRODA PASTA KARBON NANOPORI

Telah dilakukan penelitian degradasi elektrokimia senyawa kuning metanil dengan menggunakan elektroda pasta karbon nanopori sebagai anoda dan elektroda perak sebagai katoda. Dengan menggunakan sumber tegangan, potensial dan arus tertentu dialirkan melalui elektroda ke dalam larutan kuning metanil yang mengandung elektrolit pendukung pada variasi potensial, pH dan waktu degradasi. Hasil analisis diperoleh kondisi optimum pH 1, potensial 12 V dan NaCl 0,1 M sebagai larutan elektrolit terpilih. Metode ini dapat menurunkan nilai COD sampai 90,10 % dan mendegradasi sampai 99,47 % larutan kuning metanil 50 ppm. Hasil analisis LC-MS menunjukkan kuning metanil sudah terdegradasi dengan sempurna dan menghasilkan CO_2.

***Kata kunci** : kuning metanil, elektroda pasta karbon nanopori, degradasi elektrokimia.*

ABSTRACT

ELECTROCHEMICHAL DEGRADATION OF METHANIL YELLOW USING CARBON NANOPORE PASTE ELECTRODE

Has been developed research of electrochemical degradation of methanil yellow compound using nanopore carbon paste electrodes as anode and a silver electrode as cathode. Using a voltage source, a certain potential and current is passed through the electrode into the methanil yellow solution containing supporting electrolyte with the potential , pH and degradation time variations . The results obtained by analysis of the optimum conditions of pH 1, a potential of 12 volts and NaCl 0,1 M as the electrolyte solution chosen. This method can reduce the COD value to 90.10% and was degraded of 50 ppm methanil yellow solution up to 99,47 %. Results of LC-MS analysis showed that methanil yellow was degraded perfectly and produced CO_2.

***Key word** : methanil yellow, nanopore carbon paste electrode, electrochemical degradation.*