

RINGKASAN

Telah diteliti, reaksi elektrosintesis senyawa anilina dengan perpaduan elektrolit pendukung asam klorida (HCl) 1,5 M, anoda karbon dirotasikan, rentang voltase 1,1 - 1,4 volt dan kuat arus 10 - 50 mA, menghasilkan produk polimer konduktor dengan daya hantar $2,54 \times 10^{-2} \text{ ohm}^{-1} \text{ cm}^{-1}$, titik didih 500°C , dan sifat padatan rapuh berwarna hijau.

Berdasarkan spektrum Infra Merah dan Ultra Ungu, maka disimpulkan bahwa produk elektrosintesis identik dengan struktur molekul p-polyanilina.

Pengendalian atas perilaku unik elektron dan fenomena antarmuka elektroda yang meliputi : perpindahan massa (migrasi ion, difusi dan konveksi), adsorpsi-desorpsi dan transfer elektron menjadikan elektrosintesis sebagai metoda yang cukup efektif dalam mengatasi kerumitan mekanisme reaksi, khususnya pada sintesis polimer konduktor yaitu p-polyanilina.

SUMMARY

It has been examined, that electrosynthesis reaction of aniline with combination of supporting electrolyte, hydrochloride acid 1,5 M, rotated carbon anoda, with interval voltage 1,1 - 1,4 volt and current 10 - 50 mA, produced conducting polymer. The characteristics solid is brittle, green colour, boiling point 500°C, and electronic conductivity about $2,54 \times 10^{-2} \text{ cm}^{-1} \text{ ohm}^{-1}$.

Based on infrared and ultraviolet spectrum, it were concluded that electrosynthesis product is identic with p-polyaniline molecule structure.

With controlling unique behavior of electron and electrode interfacial phenomena, including of mass transport (ionic migration, diffusion and convection), adsorption - desorption and electron transfer, cause electrosynthesis as a quite effective methode to surpass difficulties mechanism reaction, especially to synthesis conducting polymer, that is p-polyaniline.