

RINGKASAN

Proses produksi xilitol secara elektrokatalitik dari D-xilosa dalam larutan sodium sulfat menggunakan timbal amalgam telah dipelajari. Produk yang dihasilkan ditentukan memakai HPLC. Katoda timbal amalgam digunakan untuk mempertinggi rendemen relatif Faraday pada produksi xilitol melalui reaksi hidrogenasi katalitik heterogen dengan H_{ads} . Pada densitas arus rendah dan konsentrasi D-xilosa yang tinggi, rendemen relatif Faraday meningkat. Tidak banyak perbedaan jumlah xilitol yang dihasilkan akibat variasi pH. Produk samping dalam jumlah yang sedikit juga dihasilkan.



SUMMARY

A electrocatalytic process of production of xylitol from D-xylose in sodium sulphat solution on amalgamated lead cathode has been studied. The products were determined by HPLC. An amalgamated lead cathode has been employed to enhance Faradaic yield in xylitol production by heterogenous catalyticreaction of hydrogenation with H_{ads} . At low current densities and high concentration of D-xylose, the Faradayc yield of xylitol was markedly increased. There were not any differences of xylitol yield that caused of variation of pH. Side products were also formed in low yield.

