

POLYACRYLAMIDE-SUPPORTED CHROMATES: PREPARATION AND APPLICATION AS A RECYCLABLE OXIDISING AGENT

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ABSTRACT

1, 6 hexanediol diacrylate (HDODA) crosslinked polyacrylamides of different crosslink densities were prepared using potassium persulphate as the radical initiator by free radical solution polymerisation. Transamidation of the HDODA-crosslinked polyacrylamides was done using excess ethylenediamine. The amino functionalised polyacrylamides were converted to Polyacrylamide-supported chromates and maximum functionality was found to be maximum for 10% crosslinked polymer. Polyacrylamide-supported chromates were used for the oxidation of primary and secondary alcohols to the corresponding carbonyl compounds. To analyse the effect of reaction conditions on the rate of the reaction, different experimental conditions like varying the solvent, molar excess, temperature and time were used and the studies revealed that the reaction conditions influence the extent of the reaction.

KEYWORDS: *Polyacrylamide Supports; Degree of Crosslinking; Chromate Oxidation; Heterogeneous; Polymeric Oxidising Agents & Macromolecular Supports*

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