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(12) PATENT APPLICATION PUBLICATION

(21) Application No.1094/DEL/1995 A

(19) INDIA

(22) Date of filing of Application :14/01/1995

(43) Publication Date : 31/08/2012

(54) Title of the invention : A PROCESS FOR THE PREPARATION OF POLYMER USEFUL FOR THE CONVERSION OF ESTERS AND AMIDES TO CORRESPONDING ALCOHOLS AND AMINES

(51) International classification

:C08L
33/08

(31) Priority Document No

:NA

(32) Priority Date

:NA

(33) Name of priority country

:NA

(86) International Application No

:NA

Filing Date

:NA

(87) International Publication No

:NA

(61) Patent of Addition to Application Number

:NA

Filing Date

:NA

(62) Divisional to Application Number

:NA

Filing Date

:NA

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(57) Abstract :

The present invention provides a process for the preparation of a new polymeric composition which exhibits catalytic activity similar to hydrolytic enzymes especially -chymotrypsin. The process of the present invention involves reacting vinyl monomers comprising functional groups present in the active site of a-chymotrypsin. The functional groups are brought together by complexation with a metal ion and an appropriate print molecule. The complex is then immobilized by polymerization in the presence of a cross-linker and a U.V. sensitive monomer. The resulting composition exhibits hydrolytic activity similar to -chymotrypsin and is useful for the conversion of esters and amides to. the corresponding alcohols and amines. The composition offers additional advantages such as enhanced catalytic activity due to improved accessibility in the high surface area .polymeric catalyst, stability at elevated temperatures, ease of recovery from the reaction mixture, ability to withstand pH variations and ability to switch on-off the catalytic activity by photoregulation.

No. of Pages : 16 No. of Claims : 9