

[54] **IMMOBILIZATION OF BIOLOGICAL MATERIAL WITHIN A POLYMER MATRIX**

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[57] **ABSTRACT**

Biological material such as microorganisms is immobilized by polymerizing in the presence of the biological material a readily soluble polyetherpolyol having some hydroxyl groups esterified with acrylic and/or methacrylic acid and remaining hydroxyl groups reacted with an isocyanate group-containing derivative of an unsaturated carboxylic acid or a polyfunctional isocyanate. Preferably, the isocyanate derivative of an unsaturated carboxylic acid is isocyanatoethyl acrylate, isocyanatoethyl methacrylate of 4-isocyanato-3-methyl-2-butyl-acrylate and the polyfunctional isocyanate is a diisocyanate or polyisocyanate. Beads can be produced by forming droplets in a water-immiscible medium and polymerizing. Polymerization can be carried out under inert gas in the presence of radical initiators or by irradiation with actinic light.

**19 Claims, 2 Drawing Sheets**