United States Patent [19]

Rosevear

[11] **4,452,892**

[45] **Jun. 5, 1984**

[54] **IMMOBILIZATION OF BIOLOGICALLY ACTIVE MATERIAL IN A HYDROGEL ON A SUPPORT**

[75] Inventor: **Alan Rosevear,** Uffington, England

[73] Assignee: **United Kingdom Atomic Energy Authority,** Great Britain

[21] Appl. No.: **299,862**

[22] Filed: **Sep. 3, 1981**

[30] **Foreign Application Priority Data**

Sep. 11, 1980 [GB] United Kingdom 8029343

[51] **Int. Cl.**[3] **C12N 11/14;** C12N 11/10; C12N 11/12; C12N 11/04

[52] **U.S. Cl.** **435/176;** 435/178; 435/179; 435/180; 435/182

[58] **Field of Search** 435/174, 176, 177, 178, 435/179, 180, 181, 182

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,809,613	5/1974	Vieth et al.	435/177 X
3,849,253	11/1974	Harvey et al.	435/182
3,860,490	1/1975	Guttag	435/182
4,004,979	1/1977	Arrameas et al.	435/181 X
4,148,689	4/1979	Hino et al.	435/182
4,269,941	5/1981	Ichimura	435/182
4,323,650	4/1982	Rosevear	435/182 X
4,335,017	6/1982	Miles et al.	435/181 X
4,336,161	6/1982	Rosevear et al.	435/181 X
4,338,401	7/1982	Cremonesi	435/182 X

Primary Examiner—David M. Naff
Attorney, Agent, or Firm—Larson and Taylor

[57] **ABSTRACT**

Biologically active material is immobilized by forming a gel precursor containing the biologically active material, a polymerizable material and a viscosity enhancing agent, applying the gel precursor to a support material and gelling the gel precursor by polymerization to form a hydrogel containing the biologically active material on the support material. A least some of the hydrogel is enmeshed with the support material. By use of the viscosity enhancing agent, the gel precursor is provided with preferred rheological properties.

7 Claims, No Drawings