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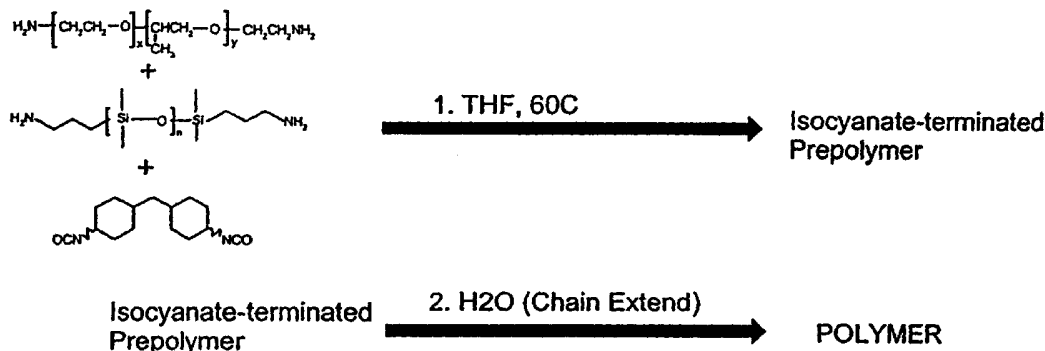
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09/753,095 29 December 2000 (29.12.2000) US(71) Applicant: **MEDTRONIC MINIMED, INC.** [US/US];
18000 Devonshire Street, Northridge, CA 91325-1219 (US).(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**Published:**

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17 October 2002(72) Inventors: **VACHON, David, J.**; 16107 Harvest Street, Granada Hills, CA 91344 (US). **COCHRAN, Brooks, B.**; 14040 Foothill Boulevard, #341, Sylmar, CA 91342 (US). **PONDER, Bill, C.**; 26856 Pulacete Drive, Valencia, CA 91354 (US).(74) Agent: **CANADY, Karen, S.**; Gates & Cooper LLP, Suite 1050, 6701 Center Drive West, Los Angeles, CA 90045 (US).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HYDROPHILIC POLYMERIC MATERIAL FOR COATING BIOSENSORS



(57) **Abstract:** Disclosed is a biocompatible membrane comprising a hydrophilic polyurea composition. The hydrophilic polyurea composition comprises the product of a reaction mixture comprising (a) an amino terminated polysiloxane, (b) a hydrophilic polymer selected from the group consisting of a diamino terminated copolymer of polypropylene glycol and polyethylene glycol, polyethylene glycol, polypropylene glycol and diamino polyethylene glycol having an average molecular weight of from about 400 to about 2000, and (c) diisocyanate selected from the group consisting of hexamethylene-1,6-diisocyanate, dicyclohexylmethane 4,4'-diisocyanate, and isophorone diisocyanate, and constituting about 50 mole % of the reaction mixture. In this mixture, (a) and (b) constitute a polymeric portion of the reaction mixture, and the hydrophilic polyurea composition has a ratio of its diffusion coefficient for oxygen to its diffusion coefficient for glucose of from about 2,000 to about 10,000. Also provided are biosensors coated with a membrane of the invention, and methods of using such biosensors to measure an analyte in a tissue of a subject.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/45506

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09D175/02 C08G18/50 C08G18/61 C08G18/66 C12Q1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08G C09D C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 13685 A (MINIMED INC ;ANTWERP BILL VAN (US)) 2 April 1998 (1998-04-02) page 5, line 8 -page 6, line 5 page 8, line 14 -page 13, line 20 claims 1,4,8,9; examples 1,3,4; table 1 ---	1,6-9, 13,16, 19-23
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A	US 5 322 063 A (ALLEN DOUGLAS J ET AL) 21 June 1994 (1994-06-21) column 3, line 17 -column 4, line 12 example II; tables I,II ---	1,3,8, 11,19-23
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Date of the actual completion of the international search

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Int. Application No

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