

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 January 2011 (13.01.2011)

(10) International Publication Number
WO 2011/004399 A4

PCT

(51) International Patent Classification:
A61L 26/00 (2006.01)

(21) International Application Number:
PCT/IN2010/000460

(22) International Filing Date:
8 July 2010 (08.07.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1621/MUM/2009 9 July 2009 (09.07.2009) IN

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

(88) Date of publication of the international search report:
11 August 2011

Date of publication of the amended claims: 1 December 2011

(54) Title: LIQUID FILMOGENIC CHITOSAN SKIN FOR WOUND HEALING AND A METHOD FOR PREPARATION THEREOF

(57) Abstract: This invention is related to chitosan filmogenic liquid for wound healing. It particularly relates to small to chronic wounds healing using filmogenic liquid applied on site which is made of pharmaceutical grade chitosan. The proposed bioactive wound healing chitosan filmogenic liquid heals even the traumatic wounds by promoting natural cell growth factors and resulting into pleasing wound healing. The filmogenic liquid chitosan and a method of obtaining the same are also disclosed. A method of obtaining pharmaceutical grade chitosan from crude chitosan is also proposed.



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AMENDED CLAIMS

received by the International Bureau on 15 August 2011(15.08.2011)

1. A liquid filmogenic pharmaceutical grade chitosan skin for wound healing comprising;
 - (i) A β -chitosan obtained from squid internal bone of high molecular weight in the range of 50,000-5,00,000 g/mole, higher degree of deacetylation (DDA) of about 98-99.5% with lowest polydispersity index in the order of less than 2 and particle size in the range of 300-500 microns;
 - (ii) Effective amount of lactic acid for formation of salt of chitosan;
 - (iii) Effective amount of glycerol to serve as a plasticizer for enhancing film forming property as well as antibacterial preservative;wherein the liquid has high viscosity in the range of 3-4500 Cps.
2. The liquid chitosan skin as claimed in claim 1 wherein the molecular weight of the chitosan is 3,00,000 g/mole.
3. The liquid chitosan skin as claimed in claim 1 wherein the polydispersity index of chitosan is in the order of 1.5-2.
4. The liquid chitosan skin as claimed in claim 1 wherein the appearance of the said liquid skin is transparent.
5. The liquid chitosan skin as claimed in claim 1 wherein the viscosity of the liquid is between 500 to 5,000 Cps.

6. A process for preparation of a liquid filmogenic pharmaceutical grade chitosan skin for wound healing comprising the steps of:
- (i) obtaining pharma grade chitosan as per the specificity disclosed in claim 1;
 - (ii) mixing it with distilled water and boiling the content at 100°C for the required time;
 - (iii) adding required amount of solution A i.e. lactic acid to the content of step (ii) to make it solubilize;
 - (iv) adding required amount of solution B i.e. a plasticizer to the content of step (iii) and stirring for 24 hours till the viscosity is maintained in the range of 500 to 4,500 Cps;
 - (v) filtering the contents through nylon cloth meshes and subsequently through PTFE filters;
 - (vi) bottling the above content for commercial use.
7. The process as claimed in claim 6 wherein solution A and B are mixed with pharma grade chitosan in a ratio such that 2% polyglucosamine is presenting the solution.