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THE PATENT OFFICE

पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

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SL No :



पेटेंट सं. / Patent No. : 366837
आवेदन सं. / Application No. : 201631002215
फाइल करने की तारीख / Date of Filing : 21/01/2016
पेटेंटी / Patentee : INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित HYDROGEL SCAFFOLD COMPRISING ALGINATE-CHITOSAN LAYERED COMPOSITE, BLENDED GEL MATRIX WITH EMBEDDED VOIDS AND TUNABLE DIMENSIONS नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 21st day of January 2016 से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled HYDROGEL SCAFFOLD COMPRISING ALGINATE-CHITOSAN LAYERED COMPOSITE, BLENDED GEL MATRIX WITH EMBEDDED VOIDS AND TUNABLE DIMENSIONS as disclosed in the above mentioned application for the term of 20 years from the 21st day of January 2016 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 17/05/2021
Date of Grant :

पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, 21st day of January 2018 को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

Note. - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 21st day of January 2018 and on the same day in every year thereafter.

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Patent Search

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Abstract:

ABSTRACT TITLE: HYDROGEL SCAFFOLD COMPRISING ALGINATE-CHITOSAN LAYERED COMPOSITE, BLENDED GEL MATRIX WITH EMBEDDED VOIDS AND TUNABLE DIM hydrogel scaffold comprising scaffold of rigidly cross-linked biopolymer having tunable structure of induced multilayer voids of desired macroporosity, elasticity and s provided together with methods of preparation of the same. The methods implemented in the present invention for the preparation of scaffold are selected from sin blending of any one or more biopolymers including (i) blending of gelatin and alginate, and (ii) coating chitosan over alginate wherein a fluidic device was utilized to ir aligned series of bubbles that left microvoids in the final structure said voids formed of surfactant sustained bubble induced in said biopolymer, which scaffold is adv suitable for end use and application such as delivering biological agents to the host tissue, providing a three-dimensional support for matrix formation. Fig. 3b

Complete Specification

Claims:We Claim:

1. Hydrogel scaffold comprising scaffold of rigidly cross-linked biopolymer having tunable structure of induced multilayer voids of desired macroporosity, elasticity and strength.
2. Hydrogel scaffold as claimed in claim 1 wherein said cross-linked rigid biopolymer include alginate having ordered structure of self-assembled bubble based emb voids of desired macroporosity, said voids formed of surfactant sustained bubble induced in said alginate.
3. Hydrogel scaffold as claimed in anyone of claims 1 or 2 comprising single phase blended or layered composite scaffold of at least two or more biopolymer includ self-assembled multilayer voids with macroporosity of said voids in the order of at least 100 µm.
4. Hydrogel scaffold as claimed in anyone of preceding claims 1 to 3 comprising controlled macroporosity including series of self-aligned voids.
5. Hydrogel scaffold as claimed in anyone of preceding claims 1-4 comprising biopolymers selected from alginate, gelatin, chitosan or mixtures thereof.

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