Title: LYSOZYME-CHITOSAN FILMS

Abstract: One aspect of the disclosure herein contemplates a composite film comprising lysozyme incorporated within a chitosan polymer matrix. In another aspect, there is disclosed a film that includes chitosan, and about 10 to about 200 weight percent lysozyme, based on the weight of the chitosan. Also disclosed is a method for making a film that includes dissolving or dispersing chitosan and lysozyme in an aqueous medium resulting in a film-forming solution or dispersion; applying the film-forming solution or dispersion to a substrate surface; and converting the film-forming solution or dispersion into a film. In a particularly useful application, the film is an antimicrobial protectant for a food article.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A23L 1/056, 1/0562, 3/2571
US CL : 426/ 573, 656, 657, 335, 332, 63

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)

U.S. : 426/ 573, 656, 657, 335, 332, 63

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 practicable, search terms used)

WEST: chitosan, film, lysozyme, enzyme, protease, antibacter$, antimicrobial, food

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tbody>
<tr>
<td>Y</td>
<td>US 4,946,870 A (PARTAIN, III et al.) 07 August 1990 (07.08.1990), see entire document.</td>
<td>1-32</td>
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Date of the actual completion of the international search

31 August 2005 (31.08.2005)

Date of mailing of the international search report

15 SEP 2005

Name and mailing address of the ISA/US

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Form PCT/ISA/210 (second sheet) (April 2005)

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See patent family annex.