SYSTEM AND METHOD FOR MARKING TEXTILES WITH NUCLEIC ACIDS

A method for authenticating a textile material that is initiated by selecting a unique nucleic acid marker having a specific length and a specific sequence. A media that causes the unique nucleic acid marker to adhere to a fibrous material is then selected. The method then proceeds to generate a nucleic acid marker mixture by mixing the media with the nucleic acid marker. The nucleic acid marker mixture is then applied to the fibrous material. A marked fibrous material is produced by marking the fibrous material with the nucleic acid marker. The textile material is manufactured with the marked fibrous material. The textile material is then authenticated by detecting the unique nucleic acid marker with primers that are specific to the unique nucleic acid. In an alternative embodiment, the media is used as a topical treatment for the fibrous material. In another alternative embodiment, the media is a carrier media that can be added to one or more fiber manufacturing processes without affecting each of the manufacturing processes. In yet another alternative embodiment, a viscous solution for fiber spinning is selected and mixed with the nucleic acid marker to generate a viscous dope that is extruded through an opening in a spinneret to form a marked fiber that is used to generate the textile material.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : B05D 5/00; 7/00
US CL : 28/169; 87/1; 427/7, 421

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

B. MINIMUM DOCUMENTATION SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 28/169; 87/1; 427/7, 421

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

Electrocr data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, search terms: nucleic acid, RNA, DNA, textile, yarn, thread, fiber

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>
</thead>
<tbody>
<tr>
<td>X, P</td>
<td>US 6,576,422 B1 (WEINSTEIN et al) 10 June 2003 (10.06.2003), column 3, line 50 to</td>
<td>1-2, 4-19, 37</td>
</tr>
<tr>
<td></td>
<td>column 4, line 52.</td>
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<td>Y</td>
<td>WO 02/084617 A1 (LEONARD, Philip) 24 October 2002 (24.10.2002), page 1, lines 27-33</td>
<td>1-53</td>
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<td></td>
<td>and page 2, lines 9-13.</td>
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</table>

Further documents are listed in the continuation of Box C.  
See patent family annex.

Date of the actual completion of the international search
14 November 2004 (14.11.2004)

Date of mailing of the international search report
08 DEC 2004

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