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(54) Title: METHOD OF POWDER COATING MEDICAL DEVICES

(57) Abstract: A method of creating a polymer coating on a medical device by powder coating the medical device with a powder material comprising a polymer and applying a solvent onto the powder coating to coalesce the powder coating into a continuous polymer film. A therapeutic agent may be mixed into the powder material, mixed into the coalescing solvent, or incorporated into the resulting polymer film. Also provided is a medical device having a polymer coating wherein the polymer coating is created according to the methods of the present invention.



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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/005506

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61L27/00 A61L29/00 A61L31/00

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)

B05D B05B A61L

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/234748 A1 (STENZEL ERIC B [IE]) 25 November 2004 (2004-11-25) paragraphs [0014], [0015]; claims -----	1-12,26
X	WO 00/64597 A (ECOLAB INC [US]) 2 November 2000 (2000-11-02) page 24, line 25 - line 31; claims 1,3,6,25,27 -----	1,4-8,26
A	US 2003/185964 A1 (WEBER JAN [US] ET AL) 2 October 2003 (2003-10-02) paragraphs [0045], [0047]; claim 1 ----- -/--	2,3,8, 10-12



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	<p>WO 2006/047490 A (BOSTON SCIENT SCIMED INC [US]; STENZEL ERIC B [IE]) 4 May 2006 (2006-05-04) page 4, line 19 - line 38 page 7, line 18 - line 30 page 8, line 24 - line 27 page 21, line 18 - line 22 claims 1,5,9</p> <p style="text-align: center;">-----</p>	1-12,26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/005506

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12, 26

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 26

method of coating a medical device, comprising the steps of:
(a) applying a powder coating to a medical device, wherein the powder coating comprises a polymer,
(b) applying a solvent to the powder coating, wherein the solvent coalesce the polymer; and
(c) removing the solvent

2. claims: 13-25, 27

method of coating a medical device, comprising the steps of:
(a) applying a powder coating to a medical device, wherein the powder coating comprises a polymer,
(b) applying a solvent to the powder coating; and
(c) applying low heat to the powder coating

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/005506

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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