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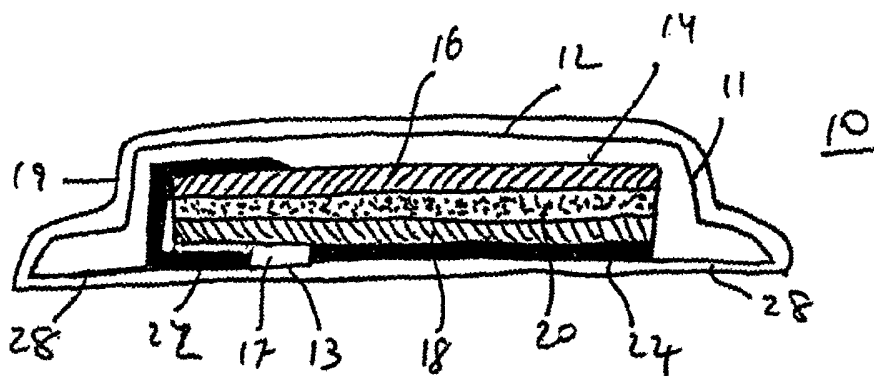
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- Published:
— with international search report
- (88) Date of publication of the international search report:
27 November 2003
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(54) Title: DEVICE AND METHOD FOR CONTROLLED DELIVERY OF ACTIVE SUBSTANCE INTO THE SKIN



(57) Abstract: An apparatus for dermal treatment of an active substance having certain physical properties comprising a flexible, wearable patch conformable to the contour of a skin surface and having: a first electrode adapted to communicate the active substance into the skin by application of an electrical current on the skin surface, a second electrode, capable of closing electrical circuit with the skin surface, a power source for providing a current and voltage, connected through a conductive media to the first and second electrode, and means for substantially controlling penetration depth of the active substance by selecting at least one variable from a plurality of variables.



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 02/00849

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61N1/30

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)

IPC 7 A61N

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 A	WO 00 53256 A (PALTI YORAM PROF) 14 September 2000 (2000-09-14) page 4, line 1 -page 7, line 4 page 17, line 16 -page 20, line 2; figures --- -/--	1-3,7,8 4,9,12, 14,15, 18-20, 45,49, 50, 52-56, 61,66, 69,70

 Further documents are listed in the continuation of box C. Patent family members are listed in 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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

20 May 2003

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18.08.2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL 02/00849

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 238 381 B1 (TAPPER ROBERT) 29 May 2001 (2001-05-29) cited in the application	49,50, 52,53, 56,59, 61-73
A	abstract column 7, line 41 -column 12, line 41; figures	1-3,7,8, 12,18, 45,49, 50,52-56
Y	WO 98 56458 A (FRIEDMAN MARK M ;NITZAN ZVI (IL); POWER PAPER LTD (IL)) 17 December 1998 (1998-12-17)	49,50, 52,53, 56,59, 61-73
A	page 13, line 9 - line 29 page 20, line 33 -page 22, line 17; figures	1-3,7, 12,18, 19,45, 54,55,60
A	US 5 652 043 A (NITZAN ZVI) 29 July 1997 (1997-07-29) cited in the application	1,2,7, 12,18, 44,45, 49,50, 52-56, 58,61, 62,66, 69,70,73
A	US 5 800 685 A (PERRAULT JAMES J) 1 September 1998 (1998-09-01) cited in the application abstract	50-56

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL 02/00849

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 23-40, 44, 74-98
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
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 II Observations where unity of invention is lacking (Continuation of item 2 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.:
1-22, 45-73

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: 1-22, 45-73

Apparatus for dermal treatment of an active substance having certain physical properties comprising a flexible, wearable patch conformable to the contour of a skin surface and having:

a first electrode adapted to communicate the active substance into the skin by application of an electrical current on the skin surface,

a second electrode, capable of closing electrical circuit with the skin surface,

a power source for providing a current and voltage, connected through a conductive media to the first and second electrode, and

means for substantially controlling penetration depth of the active substance by selecting at least one variable from a plurality of variables.

2. Claims: 41-43

A composition for iontophoretic delivery of an active ingredient into the skin, while minimizing the penetration of the active substance through the skin, comprising a stratum corneum hydrating agent.

3. Claims: 99, 100

A device for providing electrical stimulation to the skin of a subject, comprising:

a dermal patch,

an electrochemical cell, and

at least two electrodes electrically connected to the electrochemical cell.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PC L 02/00849

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