

[SS 1] .fi epodoc

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[SS 1] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] Method and device and healing and wound

Results in EPODOC 507

[SS 2] ss1 and oxygen

Results in EPODOC 1

[SS 3] ..li



1/1 © EPODOC / EPO

PN - [GB672730](#) A 19520528

PR - DEX672730 19490725

AP - GB19490021396 19490817

DT - *

CCI - [A61Q9/04](#) ; [A61K8/46](#) ; [A61Q5/04](#) ; [D06M13/248](#)

PA - HENKEL & CIE GMBH

TI - Process for the alteration of the structure of sulphur-containing scleroproteins

AB - Sulphur-containing scleroproteins such as keratins are softened and modified by treatment with solutions of dialkyl esters of thiocarbonic acids. Hair, wool, feathers, nails, albumens of sinews, collagen of bones, gristle, and connective tissue, may be treated. The softened materials may be shaped as desired and then set by an oxidation treatment or by treatment with aldehydes or alkylene dihalides. The alkyl esters of thiocarbonic acid may contain hydrophilic groups such as carboxyl, sulphonc, or hydroxyl. Specified esters are: trithiocarbonic acid bis-(carboxy-methyl ester), dithiocarbonic acid -O-S-bis-(carboxy-methyl ester), dithiocarbonic acid -SS1-bis-(carboxy-methyl ester), trithiocarbonic acid bis-(a -carboxy-ethyl ester), and trithiocarbonic acid bis-(a -sulphonc acid n-butyl ester). The alkyl esters may be used in an aqueous solution or in methyl, ethyl, or propyl alcohol. The solution may contain borax, sodium metaborate, sodium carbonate, ammonia, tri-sodium phosphate, perfumes, wetting agents, emulsifiers, and additional reducing agents such as hydroxylamine. For subsequent oxidation there may be used hydrogen peroxide, other per-compounds, addition products of urea with per-compounds, bromates, or atmospheric **oxygen**. Instead of an oxidation, the materials may subsequently be treated with alkylating agents such as alkylene dibromides or with formaldehyde or

glyoxal. ALSO: Sulphur-containing scleroproteins such as keratins are softened and modified by treating them with solutions of dialkyl esters of thio carbonic acids. The keratin substance treated may be that of hair, wool, feathers, or nails. Albumens of sinews and the collagen of bones, gristle, or connective tissue, may be treated. The process may be used for the permanent waving of hair, for straightening naturally curly hair, or for removing hair. The treated material is more receptive to dyestuffs, moth-proofing agents, and other chemicals. The softened materials may be shaped as desired and the imparted shape may be rendered permanent by oxidation or treatment with aldehydes or alkylene dihalides. After this further treatment, the materials are more resistant to the action of alkalies. Preferably, the alkyl esters of thiocarbonic acid contain hydrophilic groups such as carboxyl, sulphonic, or hydroxyl groups. Specified alkyl esters are: -trithiocarbonic acid bis-(carboxymethyl ester), dithiocarbonic acid-O-S-bis-(carboxymethyl ester), dithiocarbonic acid - **SS1** - bis - (carboxymethyl ester), trithiocarbonic acid bis-(a -carboxyethyl ester), and trithiocarbonic acid bis-(g - sulphonic acid n-butyl ester). The alkyl esters are preferably used in aqueous solution but they may be used in solution in methyl, ethyl, or propyl alcohol. Hair may be treated at 25-40 DEG C., using solutions of 5-25 per cent concentration and a treatment time of 1/2 to 2 hours. If the reagents contain acidic groups they may be used in the form of their alkali salts. The solutions preferably are alkaline and for this purpose salts such as tri-sodium phosphate, sodium carbonate, borax, sodium metaborate, or ammonia may be added. Perfumes, wetting agents, emulsifying agents and additional reducing agents such as hydroxylamine may be added. For the subsequent oxidation there may be used hydrogen peroxide, per-compounds, addition products of urea with per-compounds, bromates, or atmospheric **oxygen**. Instead of an oxidation, the materials may subsequently be treated with alkylating agents such as alkylene dibromides or with formaldehyde or glyoxal.

[SS 3] ss1

Results in EPODOC **1.606**

[SS 4] 1

Results in EPODOC **507**

[SS 5] 1 and sensor

Results in EPODOC **7**

[SS 6] ..li



PN - [WO2017041387](#) A1 20170316

PR - CN20151581605 20150912

AP - WO2015CN98617 20151224

DT - *; Rep

CT - |CN| ISR (A1)
[CN105105716](#) A 20151202
 [PX] (SHENZHEN QIANHAI ANYCHECK INFORMATION TECHNOLOGY CO LTD, et al)
 [PX] 1-8
 * , claims 1-8 *;
[CN101982760](#) A 20110302
 [Y] (UNIV BEIJING POSTS & TELECOMM)
 [Y] 1-8
 * , description, paragraphs [0007]-[0020], and figures 1-2 and 4 *;
[CN101566567](#) A 20091028
 [A] (UNIV WUHAN TECH [CN])
 [A] 1-8
 * , the whole document *;
[EP0450519](#) A2 19911009
 [A] (MINNESOTA MINING & MFG [US])
 [A] 1-8
 * , the whole document *

CTNP - |CN| ISR (A1)
 [Y] - YANG PING et al., "Vacuum Sealing Drainage with Biological Foam Dressing Accelerates the Healing of Chronic Wounds: Changes in Gelatinase Activity", CHINESE JOURNAL OF TISSUE ENGINEERING RESEARCH, (20150618), vol. 19, no. 25, ISSN 2095-4344, page 4065
 [Y] 1-8
 [Y] - WANG, YINGHONG et al., "Preparation of Gelatin Film and its Crosslinking Properties", JOURNAL OF FUNCTIONAL POLYMERS, (20030331), vol. 16, no. 1, ISSN 1008-9357, pages 36 - 37
 [Y] 5-8

CUI - [A61B5/00](#)

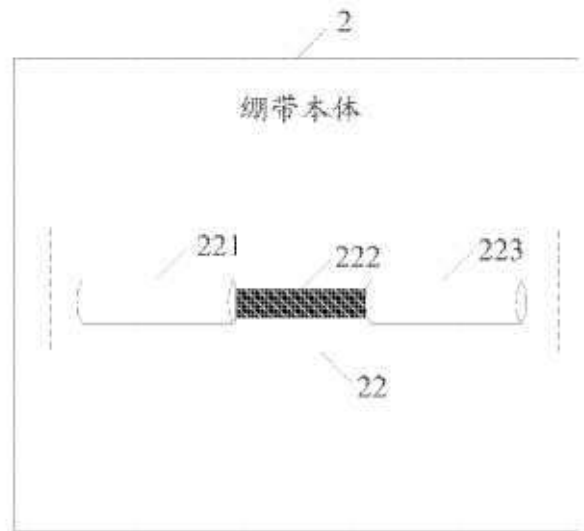


图 1

2 Bandage main body

- PA - SHENZHEN QIANHAIYILAO
SCIENCE AND TECH CO LTD [CN]
- TI - SMART **SENSOR** USED FOR
MEASURING EXTENT OF **WOUND**
HEALING, AND **METHOD** FOR
FABRICATING SAME
- AB - Provided are a smart **sensor** (22)
used for measuring the extent
of **healing** of a **wound**, and
a **method** for fabricating same.
The smart **sensor** (22) comprises
a first multi-mode optical fiber
(221), a second multi-mode
optical fiber (223), and a single-
mode optical fiber (222); the
single-mode optical fiber (222)
is located between the first multi-
mode optical fiber (221) and the
second multi-mode optical fiber
(223) to form a linear
connection. The surface of the
single-mode optical fiber (222)
is coated with a matrix
metalloproteinase sensing
membrane (2220) layer; the
matrix metalloproteinase
sensing membrane (2220) layer
absorbs light of a first
wavelength according to a
change in color of the matrix
metalloproteinase sensing
membrane (2220) caused by a
change in the activity level of the
matrix metalloproteinase of a
skin **wound**. The second multi-
mode optical fiber (223) sends
the light of first wavelength,
absorbed by the matrix
metalloproteinase sensing
membrane (2220) in the single-
mode optical fiber (222), to a
monitoring **device** (1) to
determine the extent of **healing** of
the skin **wound**. The
smart **sensor** (22) measures the
extent of **healing** of a **wound** so
that a doctor or patient may
promptly understand the **healing**
of a **wound**, and is conducive to

a doctor or patient selecting an appropriate treatment regimen according to the monitored situation.

- 2/7 © EPODOC / EPO
- PN - [CN105105716](#) A 20151202
- PR - CN20151581605 20150912
- AP - CN20151581605 20150912
- DT - I
- CUI - [A61B5/00](#)
- PA - SHENZHEN QIANHAI ANYCHECK INFORMATION TECHNOLOGY CO LTD; SHENZHEN BEIWODEKE BIOTECHNOLOGY RES INST CO LTD; SHENZHEN QIANHAI YILAO TECHNOLOGY CO LTD
- TI - Intelligent **sensor** used for detecting **healing** degree of **wound** and manufacturing **method** thereof
- AB - The invention discloses an intelligent **sensor** used for detecting the **healing** degree of a **wound** and a manufacturing **method** thereof. The intelligent **sensor** comprises a first multimode optical fiber, a second multimode optical fiber and a monomode optical fiber. The monomode optical fiber is located between the first multimode optical fiber and the second multimode optical fiber, and linear connection is formed. The surface of the monomode optical fiber is coated with a matrix metalloproteinase sensing film. The matrix metalloproteinase sensing film absorbs first-wavelength light according to changes, caused by changes of the activity degree of matrix metalloproteinase of the skin **wound**, of colors of the matrix metalloproteinase sensing film, and the first-

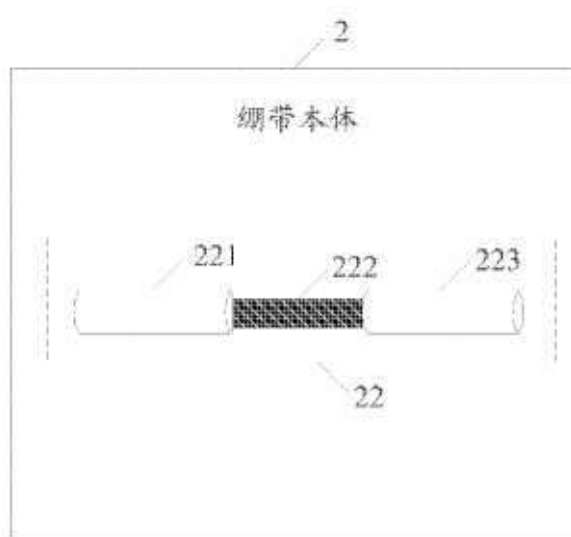


图 1

2 Bandage main body

wavelength light absorbed by the matrix metalloproteinase sensing film in the monomode optical fiber is transmitted by the second multimode optical fiber to a monitoring **device** to determine the **healing** degree of the skin **wound**. By means of the intelligent **sensor**, the **healing** degree of the **wound** can be detected, so that a doctor or a patient can learn the **healing** condition of the **wound** in time and can easily make a pertinent treatment scheme according to the monitoring condition.

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- PN - [UA61125U](#) U 20110711
- PR - UA20102010014924U 20101213
- AP - UA20102010014924U 20101213
- DT - I
- PA - RUBLENKO MYKHAILO VASYLIOVYCH [UA]; ANDRIIETS VOLODYMYR HRYHOROVYCH [UA]; DANYLCHENKO SERHII IVANOVYCH [UA]
- TI - **method** for ultrasonic control of the **wound healing** process of the abdominal wall in dogs
- AB - A **method** for ultrasonic control of the **wound healing** process of the abdominal wall in dogs consists in the layered ultrasonography of surgical wounds of the abdominal wall by the "Scanner 100 Falco" **device** with convex **sensor** in the B-mode at ultrasound frequency of 7.5 MHz in the 3-rd, 6-th and 10-th postoperative day.

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- PN - [CN203354993U](#) U 20131225
- PR - CN20132269664U 20130517
- AP - CN20132269664U 20130517
- DT - I
- PA - INNOVATION THERAPY INSTR CO LTD
- TI - **Wound** treatment instrument
- AB - The utility model belongs to the field of medical instruments, and particularly relates to fluid flushing and vacuum **wound** draining. A **wound** treatment instrument comprises a fluid moving **device** and a treatment component used for improving or compressing or conveying fluids. The fluid moving **device** comprises a controlling **device**, a vacuum pump and a liquid accumulating tank and further comprises a first pressure **sensor** and a second pressure **sensor**. The controlling **device** controls the vacuum pump. The first pressure **sensor** is connected with the vacuum pump and the second pressure **sensor** is connected with the liquid accumulating tank. The **wound** treatment instrument has the

advantages that the fluid flushing and vacuum **wound** draining technological **method** and equipment are used for promoting **healing** of a **wound** of a patient as soon as possible and portability, usability and stability of the **wound** treatment instrument are particularly improved.

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- PN - [US2013317489](#) A1 20131128
- PNFP - US8997752 B2 20150407
- PR - US201313870089 20130425; FR20060000160 20060109; US20080087434 20080702; WO2006FR24262 20061106
- AP - US201313870089 20130425
- DT - **
- CT - || STSE (B2)
[US6334069](#) B1 20011225 [] (REGENESIS BIOMEDICAL INC [US])
[US6773699](#) B1 20040810 [] (TISSUE ADHESIVE TECHNOLOGIES I [US])
 - || R141 (A1)
[US6773699](#) B1 [];
[US6334069](#) B1 []
- CCI - [A61B18/203](#) ; [A61B90/98](#)
- CCA - [A61B2018/00452](#) ; [A61B2090/061](#)
- PA - (A1)
 VIVATECH COMPANY [US]
 - (B2)
 VIVATECH COMPANY [FR]
- TI - (A1)
 Skin **Wound** Treatment System, Dressing and Biochemical Activation **Device** for the Use of Such a System
 - (B2)
 Skin **wound** treatment **method**, dressing and biochemical activation **device** for the use of such a **method**
- AB - (A1 B2)
 The present invention relates to a system for treatment of skin wounds, comprising an energy source for activation of a biochemical **healing** effect, and at least one dressing intended to be placed on the **wound** before the step of activation by said energy source, characterized in that said dressing comprises an identification means interacting in a contactless manner with a **sensor** that triggers the function of the energy source only when the distance between the **sensor** and said identification means is below a threshold value.

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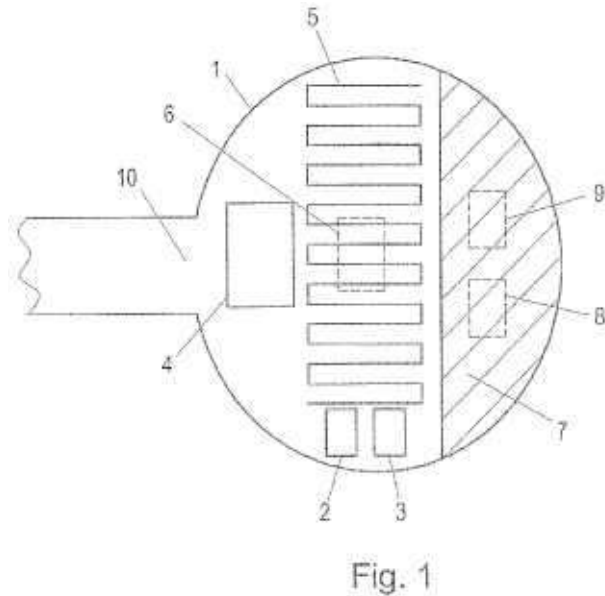
PN - [WO2014036577](#) A1 20140313

PR - AT20120000982 20120906

AP - WO2013AT00132 20130813

DT - *; Rep

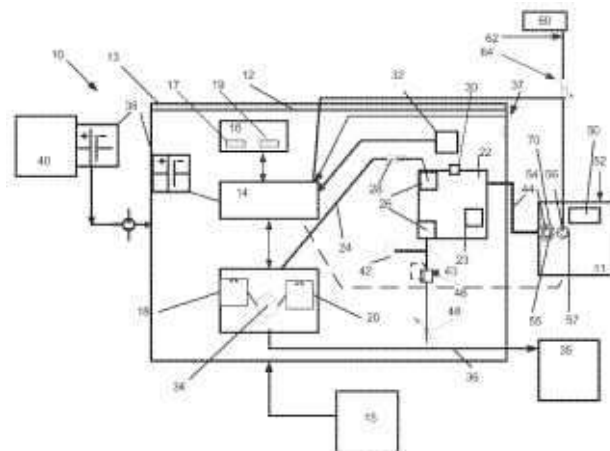
CT - |EP| ISR (A1)
[US2011054283](#) A1 20110303
[XI] (SHULER MICHAEL SIMMS [US])
[X] 9-14,16,17,20,21,23,24
* paragraphs [0115] - [0137] - [0233] - [0237] - [0337] - [0342];
figure -; claim - *
[I] 15,18,19,22;
[US2008208011](#) A1 20080828
[XI] (SHULER MICHAEL SIMMS [US])
[X] 9,10,12-16,20-24
* paragraphs [0008] , [0035] , [0040] , [0103] , [0110] - [0113] - [0118] - [0139] - [0160] - [0162] - [0168] - [0170] *
* paragraphs [0181] - [0182] - [0216] , [0225] - [0226] - [0232] , [0242]; figure -; claim - *
[I] 11,17-19;
[US2008275409](#) A1 20081106
[XI] (KANE BARTHOLOMEW J [US], et al)
[X] 9-11,13-24
* paragraphs [0007] , [0009] , [0010] , [0013] , [0021] , [0023] , [0071] , [0079] , [0086] , [0130] - [0133] - [0150]; figure -; claim - *
[I] 12;
[US2009163819](#) A1 20090625
[X] (DE KOK MARGREET [NL], et al)
[X] 9-24
* paragraphs [0009] - [0010] - [0014] - [0015] - [0028] - [0036] - [0043] - [0054] - [0060]; figure -; claim - *;
[US2009318908](#) A1 20091224
[XI] (VAN PIETERSON LIESBETH [NL], et al)
[X] 9-11,13-16,20,21,23,24
* paragraphs [0032] - [0034] - [0042] - [0062]; figure -; claim - *
[I] 12,17-19,22;



- [US2010100160](#) A1 20100422
 [XI] (EDMAN CARL FREDERICK
 [US], et al)
 [X] 9-16,20,21,23,24
 * paragraphs [0022] , [0028] ,
 [0043] , [0048] , [0050] , [0063] -
 [0066] - [0073] - [0076] - [0085] -
 [0087] - [0092] - [0097] - [0136];
 figure -; claim - *
 [I] 17-19,22
- CCI - [A61B5/6833](#) ; [A61B5/0059](#) ;
[A61B5/445](#)
- CCA - [A61B5/14552](#) ; [A61B5/4842](#) ;
[A61B2562/0242](#) ;
[A61B2562/164](#) ;
[A61F2013/00187](#) ;
[A61F2013/0094](#)
- PA - IMA INTEGRATED MICROSYSTEMS
 AUSTRIA GMBH [AT]
- TI - **METHOD FOR
 MONITORING WOUND HEALING**
- AB - The invention relates to
 a **method** and a **device** for
 monitoring **wound healing** by
 means of at least one **sensor**
 which is arranged on or in
 a **wound** dressing material (12),
 wherein the light absorption of
 the **wound** (11) is measured at at
 least two different **wound** depths.

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- PN - [US2011015587](#) A1 20110120
- PR - US20100787465
 20100526; US20090502740
 20090714
- AP - US20100787465 20100526
- DT - *; Rep
- CT - || R141 (A1)
[US2010100075](#) A1 [];
[WO2004037334](#) A1 [];
[US2008041401](#) A1 [];
[US2004142037](#) A1 [];
[US7794438](#) B2 [];
[US7128735](#) B2 [];
[US2007243512](#) A1 []



- CTNP - || R141 (A1)
[] Rick Dana Barlow, "Proper liquid waste disposal mines solid gold bottom line", Healthcare Purchasing News research, May 2004
- CCI - [A61M1/0031](#) ; [A61M1/0058](#) ;
[A61M1/0084](#) ; [A61M1/0088](#) ;
[A61M1/0096](#)
- CCA - [A61M2205/3331](#) ;
[A61M2205/60](#) ;
[A61M2205/6054](#) ;
[A61M2205/8206](#)
- TI - Irrigation **Device** and **Method**
Using Same
- AB - A disposable therapeutic **device** for the promotion of **wound healing** providing fluid irrigation and vacuum drainage of a **wound** includes a housing containing a controller and fluid moving **device** in a waterproof manner, a fluid mover capable of raising, compressing, or transferring fluid, a controller equipped to restrict fluid moving **device** in accordance with a predetermined treatment plan or duration, a chargeable power source removably connected to the housing, an optional therapeutic member of a compressible dressing or inflatable cuff to provide hemostasis, an identification member for regulating the operation of the **device** in accordance with a predetermined treatment plan, a disposable container, a pressure **sensor** and a control display panel. The fluid includes, but is not limited to, Lactoferrin, Xylitol, Dakins Solution, Polyhexanide and Hypochlorous Acid.

