

(19)
(12)

(KR)
(B1)

(51) 。 Int. Cl.7
A61B 10/00

(45)
(11)
(24)

2003 09 19
10-0398362
2003 09 02

(21) 10-2000-0051489
(22) 2000 09 01

(65)
(43)

2002-0018254
2002 03 08

(73) 4 845

(72) 5 408-5

204-1003

879-1 102-1702

(74)

:

(54)

가 ,

가

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1
2
3
4
5 4 1
6 4 2
7 4
8 4, 5, 6 PLSR
9 8 1 (plot)
10

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```

< >
100: 200:
300: 400:
500: 501:
502: 503:
600: - 700 :
800: Amp:
LCD:

```

(epidermis)

(dermis)

가

가 가 20 μ m

가

가

가 가

가

가가

가

가

가 가 . 가 가 , 가

ance Spectroscopy : NIRS) (Near Infrared Reflect

가

1100~1750nm

가
1100~1750nm

(mutiplicative scatter correction)

1 2

nt 8 , smooth 6 , 1 segment 4 , smooth 4 , 2 segme

LCD

PLSR (Partial Least Squares Regression)

1450nm

OH bond

1100~1750nm

500nm~2000nm

1100~1750nm

1 2

1
2
1 2 (200) , (300) , (400) , (500) , (100) ,
(600) , (700) , (800) LCD (Amp) ,
(100) 6V~12V ()가

500nm~2000nm (200) (100)
(300) (200) (2
00) (400)
(400) (410) (300)

(420) (500) , 2 (501)

(501) (Self Focusing Grating)(502) , (501) (502) ,

1100nm~1750nm (502) 10nm (503)

(Amp) (500) (503)

- (600) (500) (Amp)

(800) (700) , 가

(Amp) - (600) (500) (200) 가 (500)

(710) (503)

(700) (720) 가

(710) 가 , 가 가 RAM ,

가 (800) 가

LCD (700) 3 9

가

700 2500nm (combination band) 1 4 IR -CH, -NH, -OH

1800 William Herschel (1st 4th overtone band) 가

1960 Karl Norris가

가

가 (710) 3 9

3

5 4 1 , 4 , 6 4 2

7 4 , 8 4, 5, 6

PLSR (plot) , 9 8 1

00). 16 Corneometer CM 825 15 (S1

15 240 240

(S110). 16 4 1400nm 1500nm 가

O-H band

(S120). 1 2

4 , 1 2 5 6

, 2 segment smooth 8 unit 6 1 Segment smooth 4 unit 4

(multiplicative scatter correction)

4 7

$$x_k = a + b \bar{x}_k + e_k \quad x_{k \text{ corrected}} = (x_k - a) / b$$

240 (S110) 240 (calibration set) 120 (S100) 가 (validation set) (S130).

PLSR (Partial Least Squares Regression) (S140).

PLSR

가 (S150) 8 1,150nm 1,650nm

bration: PLSR) SEP(Standard Error of Prediction: (variation) (factor) SEC(Standard Error of Cali) 90%

SEC , SEP 가 (NIR) 가 (SEC SEP)가

8 가 1 PLSR SEC 4.77, SEP 5.5 (S100) () () ()

10 (710) (S160). (400) (300) (800) ()

400 (700) (200) (300) (200) (400) (200) (S200).

(700) (500) (200) (300) (500) (503)

(500) (503) 10nm (Amp) (Amp) (700) (600) (700) (S2

10). (700) (S220), (710) (S240). (S220) (S230). (710) (S220)

(S220) (710) LCD (700) (720)

가

(57)

1.

()

1100~1750nm

1100~1750nm

2.

()

(multiplicative scatter correction)

3.

()

1 2

4.

3

1 , segment 4 , smooth 4 ,
2 , segment 8 , smooth 6

5.

1

2

가

6.

1

2

가

7.

1

PLSR (Partial Least Squares Regression)

8.

()

1450nm

OH bond

1100~175

0nm
500nm~2000nm

1100~1750nm

9.
() 8

rection)
가

(multiplicative scatter cor
가

10.
() 8

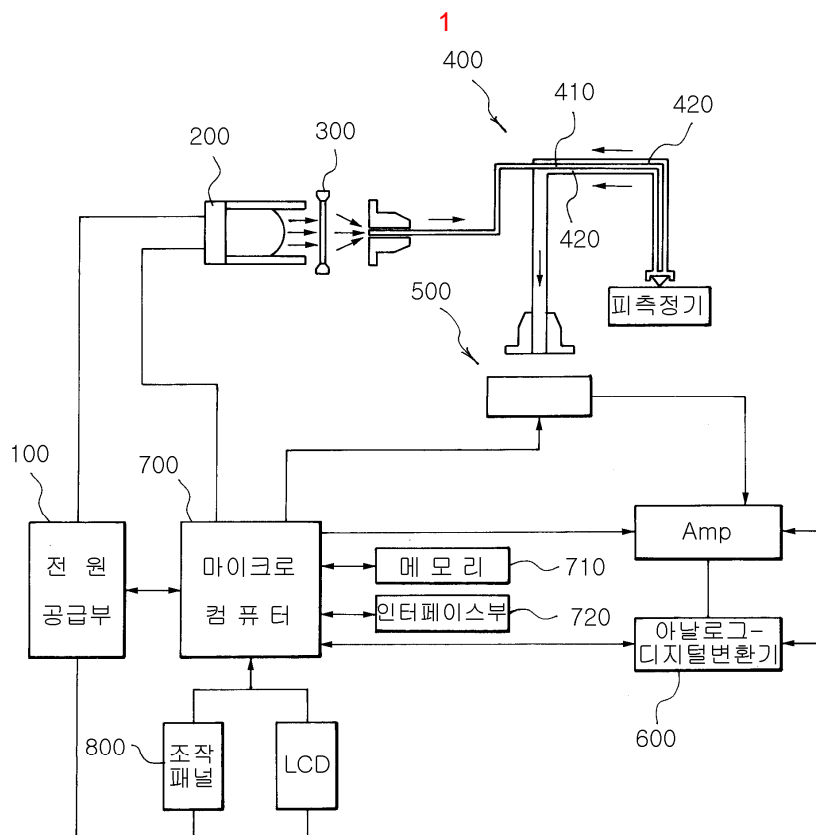
9

가

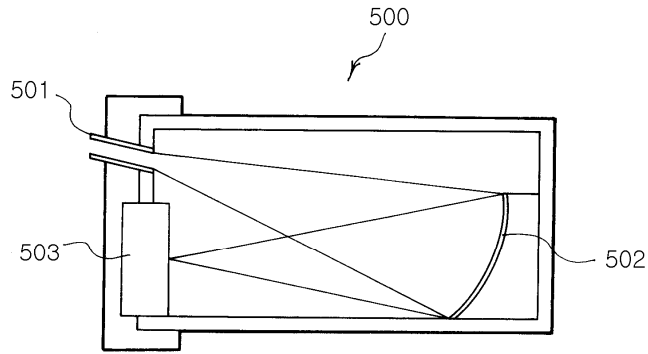
11.
() 8

9

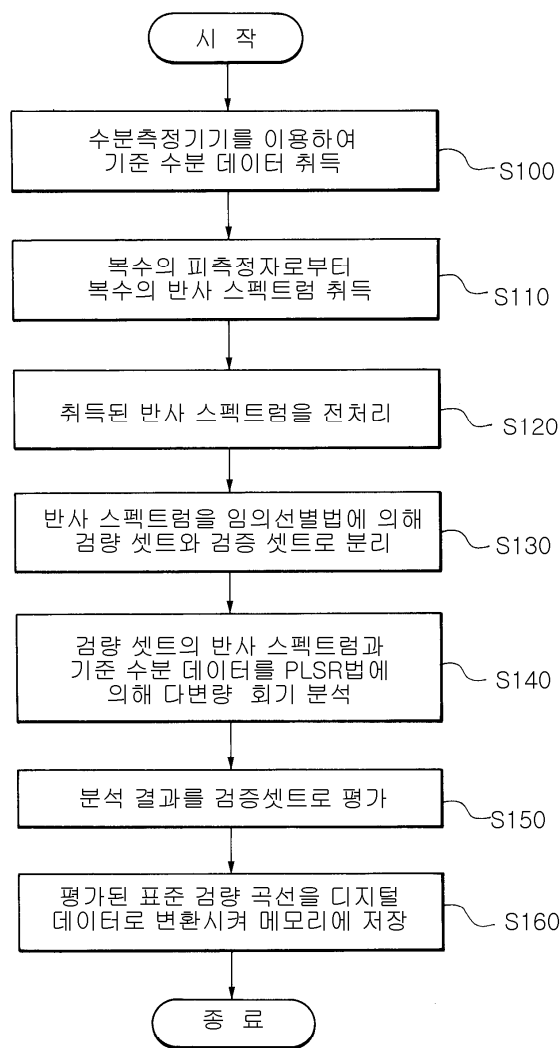
가

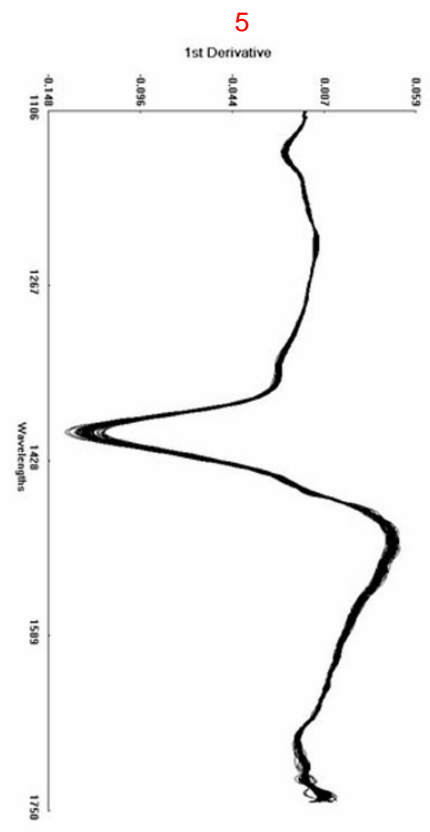
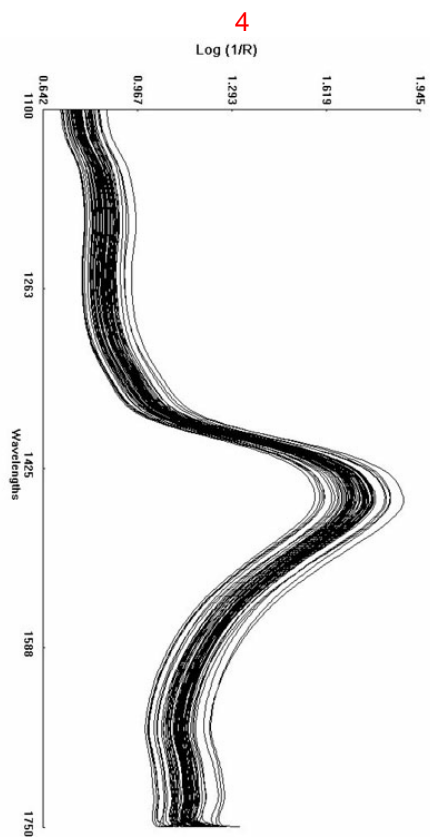


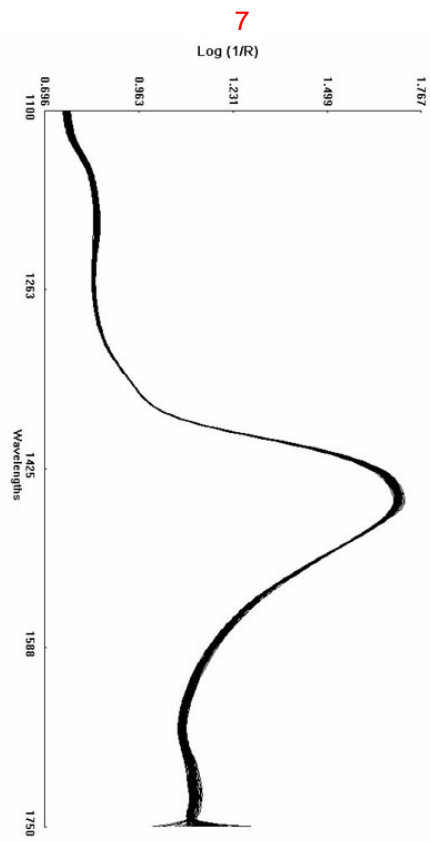
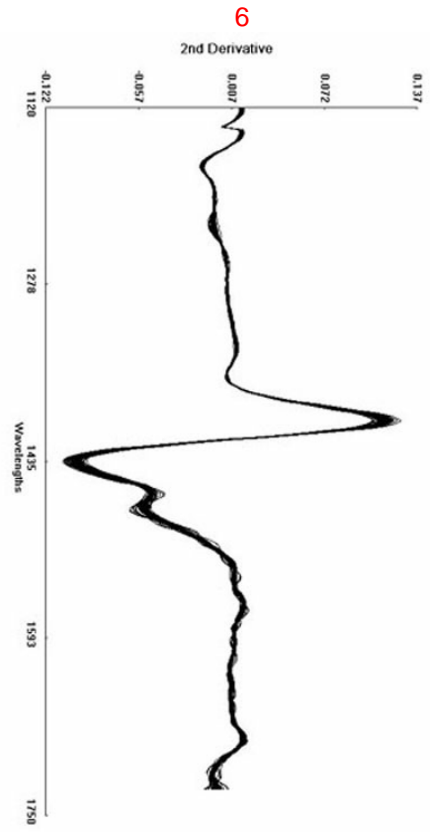
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3



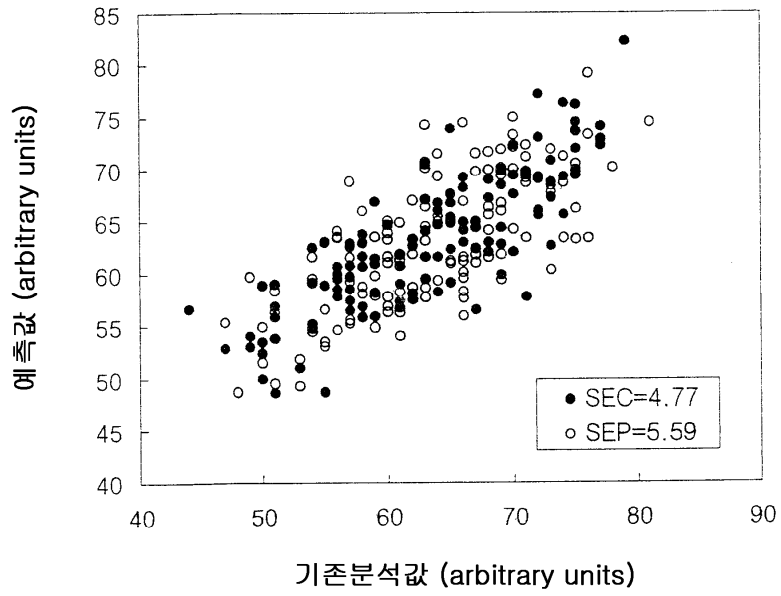


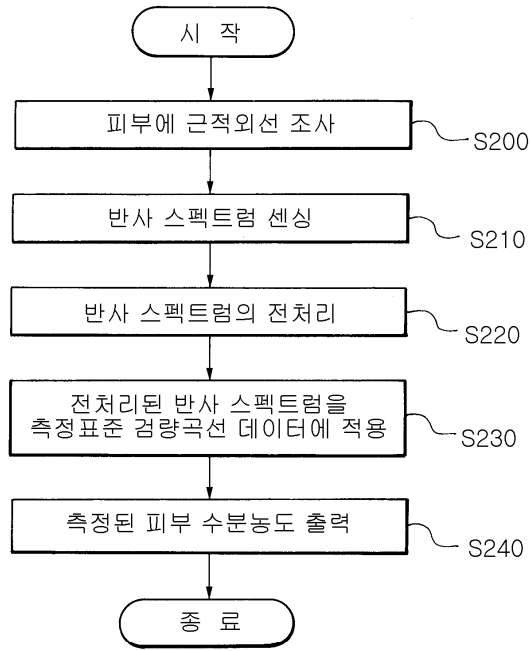


8

전 처리	팩 터	SEC	SEP
없 음	7	5.18	5.86
1 차 미 분	6	4.77	5.59
2 차 미 분	6	4.60	6.06

9





专利名称(译)	用NIRFLET方法测量皮肤水分的方法和装置		
公开(公告)号	KR100398362B1	公开(公告)日	2003-09-19
申请号	KR1020000051489	申请日	2000-09-01
[标]申请(专利权)人(译)	SPECTRON TECH		
申请(专利权)人(译)	特隆规范科技有限公司		
当前申请(专利权)人(译)	特隆规范科技有限公司		
[标]发明人	WOO YOUNG AH 우영아 KIM HYO JIN 김효진 KIM MYUNG YOON 김명윤		
发明人	우영아 김효진 김명윤		
IPC分类号	A61B5/103 A61B5/00 G01N21/27 G01N21/35 A61B10/00 G01N21/3554		
CPC分类号	A61B5/7257 G01N21/3554 A61B5/441 A61B5/4875 G01N21/3559 A61B5/0075		
其他公开文献	KR1020020018254A		
外部链接	Espacenet		

摘要(译)

用传统的皮肤水分测量装置测量多个样品皮肤的一组参考水分值。然后，通过使用多元回归计算一组测量的校准反射光谱和参考水分值组，提供一组标准校准方程，并将其存储在存储器中。接下来的步骤是参考存储在存储器中的一组标准校准方程来测量测试皮肤的皮肤水分。通过使用近红外反射光谱系统，利用便携式皮肤水分测量装置在测试皮肤上辐射近红外并感测一组反射光谱，无论温度或湿度如何变化，都可以以可重复且稳定的方式测量皮肤水分。外部环境。

