

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
29 December 2005 (29.12.2005)

PCT

(10) International Publication Number  
**WO 2005/122880 A3**

(51) International Patent Classification:

A61B 5/00 (2006.01)

(21) International Application Number:

PCT/US2005/019347

(22) International Filing Date: 2 June 2005 (02.06.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/866,373 10 June 2004 (10.06.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

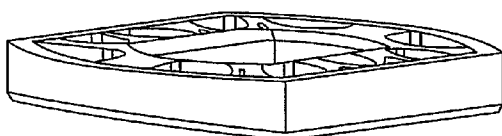
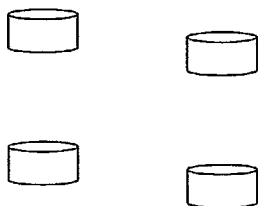
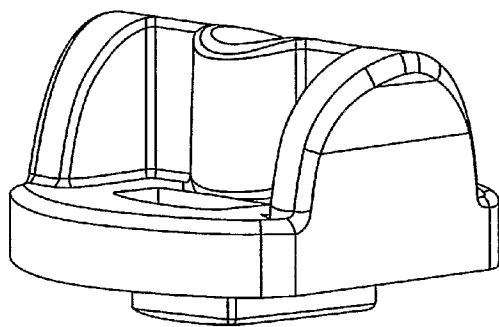
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims

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(54) Title: PREPARATION KIT FOR NONINVASIVE GLUCOSE CONCENTRATION DETERMINATION



(57) Abstract: The invention involves a kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer. The preferred kit contains a set of elements used in preparation of a sample site and/or for use in a sampling process. The invention comprises a kit that includes any of a guide, a plug, an adhesive, an alignment tool, a cleaner, contact fluid, and a package for use in combination with a noninvasive glucose concentration analyzer.

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**(88) Date of publication of the international search report:**

15 February 2007

**Date of publication of the amended claims:** 12 April 2007

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**AMENDED CLAIMS**

[received by the International Bureau on 30 November 2006 (30.11.2006)]

1. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive analyte concentration analyzer, comprising:

a guide for coupling said analyzer to a targeted and controlled sample site;

a plug for protecting said sample site; and

a multiple use sample preparation kit, wherein said kit contains in at least one package at least said guide and said plug.

2. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a guide, having an attachment surface, for aligning said noninvasive glucose analyzer to a sample site;

an adhesive for attaching said attachment surface of said guide at or near said sample site; and

a multiple use sample preparation kit, wherein said kit contains in a package said guide and said adhesive.

3. The kit of Claim 2, wherein said adhesive comprises at least one of tape and glue.

4. The kit of Claim 3, wherein said tape comprises double sided tape.

5. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a guide, having a first and second edge, for aligning an interface of said noninvasive analyzer to a targeted and controlled sample site; and

means for attaching said guide to said sample site.

6. The kit of Claim 5, wherein said attaching means comprise at least one of:

a strap, having a first and second part, wherein said first part of said strap attaches to said first edge, said strap wraps around a body part, and said second part attaches to said second edge;

glue;

double sided tape; and

loop and hook fastener.

7. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a guide for aligning said analyzer to a targeted sample site; and

a cleaner for cleaning at least one of:

a sample site;

a region about a sample site; and

said region and said sample site.

8. The kit of Claim 7, wherein said cleaner comprises any of:

alcohol;

a sterile wipe;

a weak acid solution;

a skin softener;

a glucose solvent; and

a mixture of alcohol and a water based solvent.

9. The kit of Claim 7, further comprising:

a sealed packet for containing said cleaner.

10. A kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a guide for aligning said analyzer to a targeted sample site; and

a contact fluid for optically coupling said analyzer to said sample site, wherein said contact fluid consists essentially of a fluorocarbon.

11. The kit of Claim 10, wherein said fluid does not absorb more than one percent in the near-infrared region from 1100 to 1900 nm with a pathlength of less than 0.2 mm.

12. A kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a guide for aligning said analyzer to a targeted and controlled sample site;

a photostimulator for increasing perfusion of said sample site; and

a multiple use sample preparation kit, wherein said kit contains in a package said guide and said photostimulator.

13. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a plug for expediting hydration of a sample site;

an adhesive for attaching said plug to said sample site; and

a sample preparation kit, wherein said kit contains in a package said plug and said adhesive.

14. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a plug for expediting hydration of a sample site; and

a cleaner comprising at least one of:

alcohol;

a sterile wipe;

a weak acid solution;

a skin softener;

a glucose solvent; and

a mixture of alcohol and a water based solvent.

15. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a plug for expediting hydration of a sample site; and

a fluid in, a container, for optically coupling said analyzer to said sample site.

16. The kit of Claim 15, wherein said fluid comprises at least one of:

a fluoropolymer;

a fluorocarbon;

a chlorofluorocarbon; and

a mixture of said fluorocarbon and a diluent.

17. A kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a package containing at least two of:

a guide, having an attachment surface for aligning an interface of said noninvasive analyzer to a targeted and controlled sample site;

means for attaching said guide to a region about said sample site;

a plug for expediting hydration of said sample site;

a cleaning fluid for cleaning at least one of a sample site and a region

about said sample site;

a razor for shaving hair from said sample site;

a contact fluid, in a container for interfacing said analyzer to said sample

site;

a photostimulator for dilating capillaries of said sample site; and

an alignment tool.

18. The kit of Claim 17, wherein said container further comprises a hermetic seal.

19. The kit of Claim 17, wherein said contact fluid comprises a coupling fluid.

20. The kit of Claim 19, wherein said adhesive comprises at least one of:  
tape having a first side and a second side; and  
a glue.

21. The kit of Claim 20, wherein said first side of said tape affixes to said attachment surface of said guide.

22. The kit of Claim 20, further comprising a peel off layer attached to said second side of said tape.

23. The kit of Claim 17, wherein said means for attaching comprises at least one of:

a strap having a first and second part, wherein said first part of said strap attaches to said first edge, said strap wraps around a body part, and said second part attaches to said second edge,

glue;

double sided tape; and

a loop and hook fastener.

24. The kit of Claim 23, wherein said cleaning fluid enhances attachment of said double sided tape to said region about said sample site.

25. A sample probe preparation kit comprising:

a sample preparation kit, wherein said kit contains both a cleaning solution and a wipe,

wherein said cleaning solution and said wipe contained in said kit comprise use in conjunction with an optical interface tip of a near-infrared noninvasive glucose concentration analyzer.

26. The kit of Claim 25, wherein said cleaning solution comprises at least one of:

an alcohol based solvent;

an aqueous based solvent; and

a solvent containing at least alcohol and water.



27. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive analyte concentration analyzer, comprising:

a guide having a top surface and a contact surface, wherein at least part of said contact surface of said guide comprises a flexible member; and

a plug for contacting said top surface of said guide and for hydrating said sample site.

28. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive analyte concentration analyzer, comprising:

a guide having a top surface and a contact surface, wherein at least part of said contact surface of said guide comprises a flexible element; and

an attachment for coupling to said guide.

29. The kit of Claim 28, wherein said attachment comprises at least one of:

a plug, a sample module, and a photostimulator.

30. A kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a sample preparation kit, wherein said kit contains in a package at least two of:

a guide;

means for attaching said guide to said sample site;

a plug for expediting hydration of said sample site;

a cleaning fluid for cleaning comprising at least one of a sample site and a

region about said sample site;

a razor for shaving hair from said sample site;

a contact fluid, in a container, for interfacing said analyzer to said sample

site;

a photostimulator for dilating capillaries of said sample site; and  
an alignment tool.

31. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive glucose concentration analyzer, comprising:

a cleaning fluid, in a container, for cleaning at least one of a sample site and a region about a sample site; and

a contact fluid, in a container, for interfacing said analyzer to said sample site.

32. The kit of Claim 31, wherein said cleaning fluid comprises at least one of:

alcohol;

a sterile wipe;

a weak acid solution;

a skin softener;

a glucose solvent; and

a mixture of alcohol and a water based cleaner.

33. A sample site preparation kit for use in conjunction with a near-infrared, noninvasive analyte concentration analyzer, comprising:

a guide having a contact surface and an aperture wall, wherein at least part of said contact surface of said guide comprises a flexible member; and

a plug for replaceably contacting said aperture wall of said guide and for hydrating said sample site.

34. The kit of Claim 32, further comprising a sample preparation kit, wherein said kit contains in at least one package said guide and said plug.

35. A disposable kit for use in conjunction with a near-infrared, noninvasive glucose analyzer, comprising at least one of:

- a guide for aligning an interface of said noninvasive analyzer to a targeted and controlled sample site;

- means for attaching an attachment to said sample site;

- a plug for expediting hydration of said sample site;

- a cleaning fluid for cleaning at least one of a sample site and a region about said sample site;

- a contact fluid, in a container, for interfacing said analyzer to said sample site;

- a photostimulator for dilating capillaries of said sample site; and

- an alignment tool.

36. The kit of Claim 13, wherein said adhesive attaches to said plug.

37. The kit of Claim 13, further comprising:

- a photonic stimulator integrated into said plug.

38. The kit of Claim 27, further comprising:

- a package, wherein said kit contains in said package said guide and said plug.