Title: PHOTOSTIMULATION METHOD AND APPARATUS IN COMBINATION WITH GLUCOSE DETERMINATION

Abstract: A method and apparatus using photo-stimulation to treat or pretreat a sample site prior to analyte concentration determination is presented. More particularly, photostimulation at or near at least one sample site is used to enhance perfusion of the sample site leading to reduced errors associated with sampling. Increased perfusion of the sample site leads to increased volume percentages of the target analyte and/or allows the blood or tissue constituent concentrations to more accurately and/or precisely track corresponding sample constituents in more well perfused body compartments or sites such as arteries, veins, or fingertips. In one embodiment, analysis of the photo-stimulated site is used in conjunction with glucose analyzers to determine the analyte concentration with greater ease, accuracy, or precision and may allow determination of the analyte concentration of another non-sampled body part or compartment.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
  IPC(7) : A 61B 5/00
  US CL : 600/309, 316, 334
  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)
  U.S. : 600/309, 322.316,334
  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
  JPO, EPO, Derwent

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
  Medline: glucose, photo-stimulation, heating/warning

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,007,423 A (Brantetter et al.) 14 April 1991 (16.04.1991), Fig. 1; column 3, lines 60-64; column 1, lines 15-34; column 4, lines 4-19.</td>
<td>1-6, 8-12, 14-15, 18-19, 21, 38-39, 46</td>
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<td>30-31, 33</td>
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<td>Y</td>
<td>US 6,289,230 B1 (Chaiten et al.) 11 September 2001 (11.09.2001), Abstract; column 13, lines 1-9; column 22, lines 16-31; column 9, lines 63-65.</td>
<td>1,3-5, 7-9, 12, 22, 23, 27-28, 34-36, 38-39</td>
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<td>A</td>
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<td>20, 32, 37, 40-44</td>
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<td>Y</td>
<td>US 6093,156 A (Cunningham et al.) 25 July 2000 (25.07.2000), Column 3, lines 46-61, column 4, lines 12-20, column 37, lines 32-50.</td>
<td>22, 28-31, 33, 38, 45, 47</td>
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<td>X</td>
<td>US 5,348,003 A (Caro) 20 September 1994 (20.09.1994), Abstract, column 4, lines 38-47; column 8, lines 53-63, column 9, lines 42-67, column 8, lines 44-52.</td>
<td>8,13, 16-17, 24-26</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search: 21 December 2004 (21.12.2004)

Date of mailing of the international search report: 11 JAN 2005

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