Title (en)
NONINVASIVE MEASUREMENT OF BLOOD SUGAR LEVEL

Title (de)
NICHTINVASIVE MESSUNG DES BLUTZUCKERSPIEGELS

Title (fr)
MESURE NON INVASIVE DU NIVEAU DE SUCRE DANS LE SANG

Publication
EP 1216409 A1 20020626 (EN)

Application
EP 00909963 A 20000121

Priority
- US 0001698 W 20000121
- US 9921680 W 19990917
- US 4433800 A 20000121

Abstract (en)
[origin: WO0122061A1] The noninvasive measurement system provides a technique for manipulating wave data. In particular, wave data reflected from a biological entity is received, and the reflected wave data is correlated to a substance in the biological entity. The wave data may comprise light waves, and the biological entity may comprise a human being or blood. Additionally, a substance may comprise, for example, a molecule or ionic substance. The molecule may be, for example, a glucose molecule. Furthermore, the wave data is used to form a matrix of pixels with the received wave data. The matrix of pixels may be modified by techniques of masking, stretching, or removing hot spots. Then, the pixels may be integrated to obtain an integration value that is correlated to glucose level. The correlation process may use a lookup table, which may be calibrated to a particular biological entity. Moreover, an amplitude and phase angle may be calculated for the reflected wave data and used to identify a glucose level in the biological entity. Additionally, the reflected wave data may be used to determine glaucoma pressure. The glucose level may be displayed on a monitor attached to the computer. The computer may be a portable, self-contained unit that comprises a data processing system and a wave reflection capture system. On the other hand, the computer may be attached to a network of other computers, wherein the reflected wave data is received by the computer and forwarded to another computer in the network for processing.

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G01N 21/17; A61B 5/00

IPC 8 full level
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CPC (source: EP)
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Citation (search report)
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