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Lampotang et al.

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(54) **MARKER DETECTION METHOD AND APPARATUS TO MONITOR DRUG COMPLIANCE**

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(51) **Int. Cl.**

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- G01N 37/00** (2006.01)
- G01N 33/497** (2006.01)
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(52) **U.S. Cl.** **422/84; 422/83; 422/85; 422/86; 436/13; 436/56; 436/164; 436/171; 73/23.2; 73/23.3; 73/23.34**

(58) **Field of Classification Search** **422/84; 73/23.3; 436/13**

See application file for complete search history.

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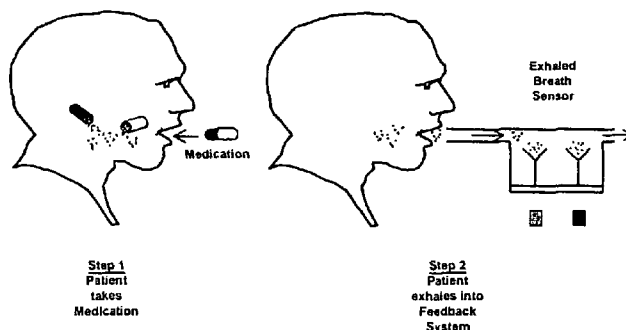
(57) **ABSTRACT**

The present invention includes a method and apparatus for monitoring drug compliance by detecting markers, such as odors, upon exhalation by a patient after medication is taken, wherein such markers result either directly from the medication itself or from an additive combined with the medication. In the case of olfactory markers, the invention preferably utilizes electronic sensor technology, such as the commercial devices referred to as "artificial noses" or "electronic noses," to non-invasively monitor compliance. The invention further includes a reporting system capable of tracking compliance (remote or proximate) and providing the necessary alerts.

32 Claims, 3 Drawing Sheets

Patient Compliance Monitoring System

Overview



PCMS includes marker compound included in medication that is exhaled into detection system for accurate and reliable monitoring off-site