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(54) Title: METHOD FOR ENHANCED DETERMINATION OF ANALYTE CONCENTRATION IN BODILY FLUID

(57) Abstract: The present invention relates to an analytical method for determining a concentration of an analyte in a bodily fluid by using a mobile device having a camera and a processor, comprising: i) capturing an image of an optical test strip by the camera, the test strip having a sample of the bodily fluid applied onto a reagent test region; and ii) receiving local temperature information at a current location of the mobile device, - wherein said local temperature information is received by the mobile device from at least two of the following temperature source options: a) a remote weather information service; b) a temperature sensor of an external electronic device; and c) a temperature sensor of the mobile device; - or wherein said local temperature information is received by the mobile device from a temperature sensor of an external electronic device; and wherein the external electronic device is selected from one or more of wearables, such as fitness trackers, smart watches, smart glasses, smart clothing; smart-home components, such as electronic heating systems, smart temperature measurement units, home weather stations; and body-worn sensors, such as non-invasive analyte measurement sensors; and iii) optionally, determining, by the processor, a correction temperature and/or a correction temperature function, using the local temperature information from step ii); and iv) determining, by the processor, the analyte concentration from the image captured in step i), based on a color formation reaction at the reagent test region having the sample of the bodily fluid applied thereto, taking into account at least one of the local temperature information from step ii), the correction temperature from step iii), and the correction temperature function from step iii).

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