

CLAIMS

1. A device (1) which is portable for measuring jaundice levels, the device (1) comprising
5 a body (2) accommodating a light transmitting means (6) for emitting light at a predetermined wavelength;
a light receiving means for receiving reflected light;
means (4) to activate the device (1);
means to determine jaundice levels that is incorporated into a System on a Chip
10 module (417) in the device (1); and
a global positioning system (415);
wherein the device (1), upon contact with a surface of a target area, light is emitted and received by the device (1), in which the received light is converted into electronic signals to be processed by the means for determining jaundice levels that
15 is incorporated with a series of predetermined jaundice level values to be compared with the converted electronic signals from the reflected light through machine learning, which is then output in combination with a location of the device (1) obtained via the global positioning system (415) for mapping of a data landscape.
- 20 2. The device (1) according to claim 1 further comprises a fibre optic bundle incorporated to the light transmitting means (6) and light receiving means for channelling the emitted and received light.
3. The device (1) according to claims 1 or 2, wherein the light transmitting means (6)
25 emits light at a wavelength range of 340nm to 850nm.

4. The device (1) according to any one of the preceding claims, wherein the determined jaundice levels are displayed on a displaying means (3) incorporated in the device (1).
- 5 5. The device (1) according to any one of the preceding claims, wherein the means for transmitting information is capable of sending information to means for printing the determined jaundice levels for further analysis.
- 10 6. The device (1) according to any one of the preceding claims, further comprising a Global System for Mobile Communications (GSM) (415') module for transmitting data across Internet of Things (IoT) applications.
- 15 7. A method for non-invasive measurement of jaundice level using a portable device (1) based on any one of the preceding claims, the method comprising the steps of:
 - emitting light of a predetermined wavelength to a target area by a light transmitting means (6) of the device (1);
 - receiving reflected light from the target area;
 - converting the reflected light received by a light receiving means to electronic
 - 20 signals; and
 - determining the jaundice level by processing the converted electronic signals for comparison with a series of predetermined jaundice level values through machine learning by a means for determining jaundice level that is incorporated into a System on a Chip module (417) in the device (1);
 - 25 wherein the determined jaundice level is then output in combination with a location of the device (1) obtained via a global positioning system (415) for mapping of a data landscape.