HYPOXIA DETECTOR DEVICE WITH WIRELESS ALERT SYSTEM

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Technology description

FEATURES

The invention consists of a portable device capable of measuring blood oxygen saturation (SaO_2) continuously, associated with a wireless communication system for sending alerts, capable of communicating with up to five similar devices.

TECHNOLOGY READINESS LEVEL

A prototype of this technology has been built and tested in a laboratory conditions, so it is located at level 4 of the NASA Technology Readiness scale. Validation tests and industrial design improvement are required to make it attractive to the user.

MARKET INFORMATION

According to the Market & Market agency, the global medical devices market is projected to reach USD 63.43 billion by 2023 from USD 20.59 billion in 2018, at a CAGR of 25.2% during the forecast period. It is expected that factors such as increased initiatives of governments of developed and emerging countries to promote digital health and the evolution of high-speed network technologies and the growing penetration of smartphones, tablets and other mobile platforms in services of health drive the growth of this market.
On the other hand, the agency Allied Market Research, valued the market of pulse oximeters at USD 1.23 billion in 2015, and is expected to reach USD 1.9 billion by 2022, with a CAGR of 6.3% during the period of 2016- 2022

Application area

The present invention relates to medical instruments and optoelectronics specifically with those used to measure blood oxygen saturation. The device measures this parameter through the levels of light absorption by two substances present in the blood (oxyhemoglobin and deoxyhemoglobin).
Once the variable is determined, it is converted from an optical signal to an electrical signal, then the electrical signal is converted to a signal that can easily be interpreted by a user for analysis.

Advantages

its ability to continuously monitor blood oxygen saturation, have wireless communication, ability to detect hypoxia, and therefore does not send wireless alerts.

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