

Point-of-Care Device for Haemoglobin



Problem Statement: Every year ten to fifteen million new cases of anaemia are registered in India. The reason for it is primarily a result of poor diet and sedentary lifestyle. Haemoglobin levels in the blood is a critical factor for recovery from many diseases. In pregnant women, haemoglobin monitoring becomes necessary for tracking foetal and maternal health. Additionally, athletes also need to monitor their haemoglobin levels for optimum performance. Point-of-care tests for checking haemoglobin levels provide rapid results. Unlike conventional laboratory-based testing, rapid tests can be used at the time and place of patient care, which can help in further treatment. Timely detection of low haemoglobin levels thus becomes very crucial to take corrective action and improve a person's overall health. The researchers have addressed this need and developed an affordable point-of-care device for quantifying haemoglobin levels. The anaemic patients and pregnant women are key target consumers of this device.

Uniqueness of the Solution: This device is antibacterial, and ferrous cyanide is not used in its operation, thus making it safer for wider use. In addition, it is affordable and an easy-to-use portable point-of-care device with a digital reader.

Current Status of Technology: The prototype of the portable point-of-care device has been developed, and it is at TRL 3 stage. The researchers have also performed a small scale clinical study. In addition, they are in discussion with a company for licensing this technology.

Societal Impact: The point-of-care device developed for the detection of haemoglobin is economical compared to the commercially available devices. Hence, it can be a budget-friendly option everywhere, including rural areas. Furthermore, in the public health domain, the device can be used in primary health care centres for monitoring maternal and foetal health in a cost-effective way.

Patent(s): Filed

Relevant Industries: Healthcare, Medical devices.

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