

Portable haemoglobin meter

Country of origin | Brazil

Health problem addressed

Anemia is one of the most common blood disorders globally. Iron deficiency anemia is the most prevalent nutritional disorder in the world. Anemia diagnosis is frequently not performed or the test results are delayed, causing aggravations or even sequels in the most vulnerable population, children and pregnant women.

Product description

Portable hemoglobin meters that are user-friendly can be a great aid to change the global anemia scenario. Avoiding the displacement of patients and shortening the diagnostic process, this solution can spread this clinical test to people with low access to health services.



Product functionality

The portable hemoglobin meter is a micro processed photometer. In a disposable vial, containing Drabkin's reagent, 10 uL of blood sample are dropped. Reaction follows inside the vial, also used as the lecture cuvette. Hemoglobin content is read and calculated by a microprocessor and proprietary software. Results are presented in a LCD display.

Developer's claims of product benefits

The reagents are stable for a long periods and extreme environmental conditions. The use of the injection vial, containing the reagent, as a cuvette, reduces the number of operations, reduces costs, speeds lecture and allows portability. The equipment is battery (rechargeable) driven allowing the use in any environment.

Operating steps

After cleaning the skin, a puncture is done and a 10 uL blood sample is collected with a micropipette and transferred to the reagent vial. After 30 seconds of mixing, the vial is inserted in the equipment and a button is pressed. The sample hemoglobin content is exhibited in the display in g/dL.

Development stage

The device is fully developed and extensively tested (over 20,000 patients). In Brazil validation was performed by PP-SUS program, a governmental trial of innovative technologies for public health care. PAHO and IPTI are performing tests (process n° BR/LOA/1000065.001). Researchers from São Paulo University and FIOCRUZ Foundation are performing tests in anemia trials.

Future work and challenges

For the moment, it is commercialized only in Brazil, in compliance with the standards from Brazilian national regulatory legal demands (ANVISA). International certifications need to be performed. Additionally, there exists a need for investors and/or commercial partners interested in business improvement.

User and environment

User: Nurse, physician, technician

Training: One to two days, blood collection practice by puncture and pipette

Maintenance: Manufacturer

Environment of use

Requirements: Powered by batteries and designed for a global environment use, there are no special requirements. The tests are disposable and previously sterilized.

Product specifications

Dimensions (mm): 167 x 108 x 37

Weight (kg): 0.358

Consumables: Hemoglobin meter reagent vial, tips

Life time: several years

Retail Price (USD): 1500

List price (USD): 1500

List price of consumables (USD): 1.0/vial

Other features: Portable and reusable. Runs on batteries, uses software.

Year of commercialization: 2010

Currently sold in: Brazil