

White blood cell counting system

Country of origin | Sweden

Primary function | Diagnosis

Health problem addressed

This white blood cells (WBC) counting system can be used to support efforts to reduce antibiotic overprescribing and in determining if an infection is due to a virus or bacteria. It can also be used to determine if a symptom is due to an infection, an allergy reaction or a parasite infection. It can also be used to monitor other therapies, such as clozapine treatment in schizophrenia. The differential counting can speed up treatment decision.

Disease addressed

Certain infectious and parasitic diseases; diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism; diseases of the respiratory system; symptoms, signs, and abnormal clinical and laboratory findings.

Technical descriptions

This system is designed for quantitative determination of total WBC and a 5-part differential WBC count, including neutrophils, lymphocytes, monocytes, eosinophils and basophils using image and picture analysis. The red cells are hemolyzed in the microcuvette and a staining agent colours the white cells. Several images of the stained white cells are taken and cells are classified. The cells are counted by image analysis in the analyzer with results in 5 min.

Developer's claims of products benefits

The increase in bacterial resistance to antibiotics is dramatic and combating this growth is a top priority for global policy and public health. Access to this point-of-care WBC test may support in determining if an infection is of viral or bacterial origin, and if antibiotics are needed. Waiting for a lab result is not always an option, for those in rural areas, low resource setting or where laboratory is not available. It might serve as guidance (not diagnosis) for children susceptible of having pneumonia.

Operating steps

Capillary or venous specimen can be used. Bring the microcuvette into contact with the blood. The microcuvette is automatically filled by capillary action. Wipe off the outside of the microcuvette. Place it in the analyzer and close the lid. Result are displayed in 5 minutes.

Regulatory status and standards compliance

European Community (CE-mark). Comply with IVD directive, ISO standards as applicable and HL7.

Use and maintenance

User: Untrained individual, trained caregiver (e.g family member), midwife, technician, nurse, general physician, specialised physician, community health workers.

Maintenance/Calibration required: No

Environment of use

Setting: Rural settings, urban settings, outdoors, indoors, at home, primary level (health post, health centre), secondary level (general hospital), tertiary level (specialists hospital), ambulances, anywhere.

Facility requirements: Specific ambient temperature and/or humidity range, healthcare waste disposal facilities (pathological waste, sharps, chemicals, etc.).

Energy requirements: Replaceable batteries, continuous power supply.

Product specifications

Weight (kg): 1.3

Dimensions: 157mm x 155mm x 188mm

Consumables: Microcuvettes, reagent and cleaner as provided by producer

In UN catalog: No

Commercial information

Year of commercialization: 2016

Number of units distributed: 1 001-10 000

Model: WBC Diff

Other features: Portable



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