

Digital Cell Imaging System

CellaVision® DC-1



Brief Product Description

The CellaVision DC-1 is designed to automate and simplify the process of performing blood cell differentials in low-volume laboratories. The system leverages high-speed robotics and digital imaging to automatically locate and capture high-quality images of cells. It allows both standalone and networked installation.

Principles and Technology

The analyzer automatically moves a prepared hematology slide under the microscope. Utilizing Artificial Neural Network technology, the monolayer is located in the smear and scanned in a battlement pattern. While doing this, the analyzer locates WBCs and RBCs and stores high-quality images of each located cell. The analyzer pre-classifies each located WBC and performs pre-characterization of red blood cell morphology for operator review.

Parameters

WBC Classification

The CellaVision Peripheral Blood Application automatically pre-classifies WBCs into these classes:

- Band neutrophils
- Segmented neutrophils
- Basophils
- Eosinophils
- Lymphocytes
- Monocytes
- Promyelocytes
- Myelocytes
- Metamyelocytes
- Blast cells
- Lymphocyte variant forms
- Plasma cells
- Additional user-defined cell types can be customized

The CellaVision Peripheral Blood Application also automatically pre-classifies non-WBCs into these classes:

- Nucleated RBC
- Giant thrombocytes
- Thrombocyte aggregations
- Smudge cells
- Artefacts
- Not Classed
- Other

The operator can manually re-classify cells and other objects to any of the above mentioned classes and also to any of the 15 user-defined cell classes.

RBC Morphology

The CellaVision Peripheral Blood Application pre-characterizes the RBC morphology by shape, color and size and suggests preliminary grading for these morphological characteristics:

- Polychromatic cells
- Hypochromatic cells
- Anisocytosis
- Microcytes
- Macrocytes
- Poikilocytosis

Parameters

The operator can change the suggested grading for the above mentioned characteristics and can also manually specify grading for these morphological characteristics:

- Target cells
- Schistocytes
- Helmet cells
- Sickle cells
- Spherocytes
- Elliptocytes
- Ovalocytes
- Teardrop cells
- Stomatocytes
- Acanthocytes
- Echinocytes
- Howell-Jolly bodies
- Pappenheimer bodies
- Basophilic stippling
- Parasites
- Up to 10 user-defined characteristics

Platelet Estimation

When performing a platelet estimation, the analyzer captures an overview image of the RBC monolayer. The operator can count the number of platelets or estimate the platelet concentration in the overview image which helps standardize your platelet estimate.

Additional Features Including Feathered Edge

- Pre-selected 100x high power fields and calculation table for manual platelet slide estimates.
- Add pre-coded or free-text comments to any slide, cell category or individual cell image.
- Archive or export cell images for educational use or to track an individual patient's cell morphology results throughout treatment.
- Feathered edge view to assess samples for acceptable cell distribution, platelet clumps or WBC clustering at edges or smear. View images in the Feathered Edge tab at 10x or zoom in for a closer look.

Throughput

Peripheral Blood - Up to 10 slides/hour*

NOTE: Processing time may vary depending on test configuration, smear quality, WBC concentration and number of non-WBCs.

Load Capacity

1 slide

Quality Control

One freshly stained slide from a blood sample with a WBC count within the normal range to perform a daily cell location test.

Dimensions and Weight

11" (W) X 15.4" (D) X 14.6" (H); 24 LBS

Supported Optional Software - Digital Slide Application

- CellaVision Remote Review Software
- CellaVision Server Software
- CellaVision Proficiency Software (Web-Based)

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