BC-5390

Auto Hematology Analyzer

mindray

healthcare within reach

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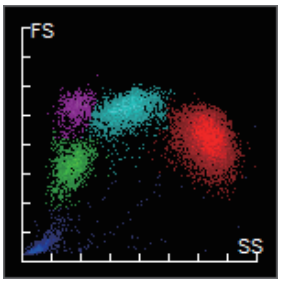
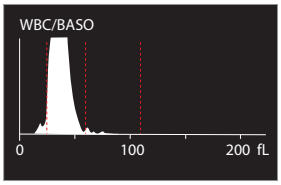
The new BC-5390 Auto Hematology Analyzer provides rapid and reliable test from just 33uL of blood. Utilizing three mainstream technologies: laser scatter, flow cytometry and chemical dye, BC-5390 can provide accurate differential readout. In order to save time and increase walk-away automation, an autoloader is equipped to hold 40 tubes one time and achieve 60 samples/hr throughput. With the popular windows based software, you can easily perform the routine tests, manage patient results, set up auto-cleaning and connect with LIS server. BC-5390 is your ideal choice to streamline daily workflow.

- Semi-conductor laser combined with chemical dye method advanced flow cytometry
- 21 parameters with complete 5-part differentiation(CBC+DIFF) on white blood cells
- 40-tubes autoloader with random access
- Closed tube for STAT samples
- Capability to flag abnormal samples
- Only 33 µl sample volume for CBC + DIFF results
- Up to 60 samples processed per hour
- Supports whole blood mode for capillary sample
- Large storage capacity: up to 100,000 samples
- Support bi-directional LIS connection
- Customization on reference range, auto-cleaning schedule and report format

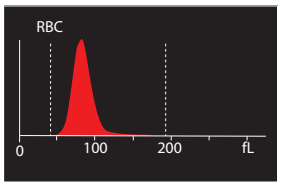


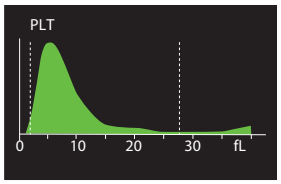
Eosinophilia sample



White blood cell differentiation

The semi-conductor laser system collects forward scatter and side scatter information of white blood cells in a flow cell and differentiates lymphocytes, monocytes, neutrophils and eosinophils according to the cell size and granule complexity. Specific chemical dye treatment to eosinophils can separate from neutrophils in DIFF scattergram even on Eosinophilia sample . In addition, basophils are measured in an impedance channel upon lysing action on the RBC and other WBC groups.



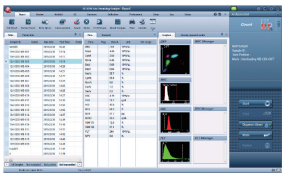


Advanced impedance measurement for RBC and PLT

Mindray patented digital sheath flow and weak signal detection techniques are applied to ensure accurate counting and sizing of RBC and PLT in the impedance channel. Dynamic discriminator adjustment can improve the separation of RBC and PLT groups when large platelet and micro RBC are present. Benefiting from these improvements, MCV, RDW and PLT performance are greatly enhanced.

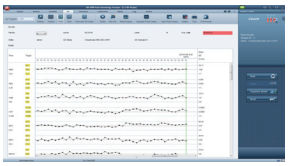
M-5 reagents and BC-5D controls

Only 4 routine M-5 reagents are utilized in counting cycle featuring economical consumption and 2 years shelf life. To help precision monitoring, three levels of BC-5D controls are offered in a ready-to-use kit and the assay value table can be automatically imported through USB memory.



Windows based software

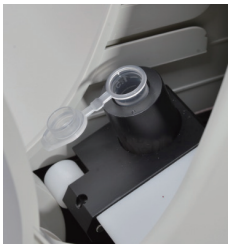
The analyzer's windows-based software is simple to use and plays a powerful information hub to store 100000 patient results. You can set-up password access, reference range, auto-cleaning schedule and so on. Also, the built-in report format tool can help to customize the final report type to include microscopic counting, ESR, blood type and diagnostic remarks.



QC monitoring and patient archive

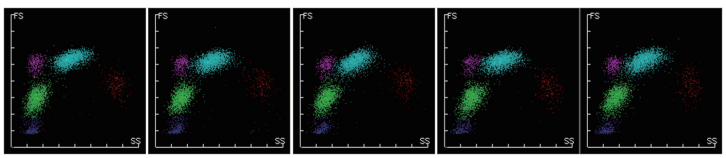
60 QC files are designed to store L-J QC results. 300 data points can be recorded in single file. 2 common QC programs are enabled for full quality assurance purposes. Patient data is archived and can be searched and presented in trend curve for case follow-up.


Venous whole blood sample


Pre-diluted sample


Capillary whole blood sample

Different holder adapters supports three types of sample including Venous whole blood sample, Predilute sample and Capillary whole blood sample. Capillary whole blood sample can be well tested directly which is more convenient for users and makes the analyzers an ideal choice to work with pediatric and geriatric samples.


1 hour | 4 hours | 8 hours | 12 hours | 24 hours

Anti-aging samples with more than 12 hours transportation to central labs which is a quite frequent and normal situation for small to medium labs in countryside. Hence, diagnosing anti-aging samples accurately becomes an significant issue for developing countries or cities. With enhanced reagent system and upgraded reagent formula, BC-5390 is an ideal solution that can better differentiate white blood cells on anti-aging samples under room temperature.

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Technical Specifications:

Principles
Impedance method for WBC/BAS, RBC and PLT counting;
Cyanide free reagent for hemoglobin test;
Flow Cytometry (FCM) + Laser scatter + Chemical dye method for WBC differential analysis

Parameters
21: WBC, LYM(#,%), NEU(#,%), MON (#,%), EOS (#,%), BAS (#,%), RBC, HGB, HCT, MCV, MCH, MCHC, RDW-CV, RDW-SD, PLT, MPV
3 histograms and 1 scattergram

Analysis Mode
Autoloader Whole Blood Mode
Closed Whole Blood Mode
Closed Predilute Mode

Throughput
Up to 60 samples per hour with autoloader
Up to 51 samples per hour with closed mode
Up to 53 samples per hour with predilute mode

Sample Volume
Whole Blood CBC+DIFF 33 µL
Whole Blood CBC 24 µL
Prediluted: 20 µL

Test Panel
CBC CBC+DIFF

Performance

	Carryover	Precision	Linearity
WBC (x 10^3/µL)	≤ 1.0%	≤ 0.15 (SD) or 3.0% (CV%)	0.3-200
RBC (x 10^6/µL)	≤ 1.0%	≤ 1.5%	0.2-8.0
HGB (g/dL)	≤ 1.0%	≤ 1.5%	0.5-25
HCT (%)	≤ 1.0%	≤ 2.0%	2 -75
PLT (x 10^3 /µL)	≤ 1.0%	≤ 7.5 (SD) or 5.0% (CV%)	5-2000

Data Storage Capacity
Up to 100,000 results including numeric and graphical information

Communication
LAN Port supports HL7 protocol

Operating Environment
Temperature: 15 °C~30°C
Humidity: 30~85%
Air Pressure: 70~106 kPa

Power Requirement
A.C.100-240V ≤ 300VA 50/60Hz

Dimension and Weight
Dimension (WxDxH, inches): 22.4 x 23.2 x 20.6
Weight: ≤ 143 pounds

Mindray Building, Keji 12th Road South,
High-tech Industrial Park, Nanshan, Shenzhen 518057, P.R. China
Tel: +86 755 8188 8998 Fax: +86 755 26582680
E-mail: intl-market@mindray.com www.mindray.com

P/N:ENG-BC5390FDA-210285x4-20170210

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