PE-7100

5 Diff

Fully Auto Hematology Analyzer

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Technical Parameters

Working Principles

WBC: Semiconductor laser flow cytometry method
RBC/PLT: Electrical impedance method
HGB: colorimetric method

Parameters

23 Parameters: WBC,Neu#, Lym#, Mon#, Eos#, Bas#, Neu%, Lym%, Mon%, Eos%, Bas%, RBC, HGB, HCT, MCV, MCH, MCHC, RDW-SD, RWD-CV, PLT, MPV, PDW, PCT
8 research parameters
4 scatter diagrams
3 histograms: WBC/RBC/PLT

Throughput

60 samples / h

Test Mode

CBC, CBC+DIFF

Storage

50,000 sample results with scattergrams and histograms

QC Mode

L-J / X-B

Language

Chinese/English/Portuguese/Bengal/Romanian
Support cuctomized language

Display

10.4" color touch screen
Liquid Crystal Display(LCD)
Resolution: 800×600

Sample Volume

Venous Mode/Capillary Mode/
Pre-diluted Mode≤20μL

Calibration

Auto calibration, Manual calibration

Reagent

Diluent, LH Lyse, Diff Lyse,
Cleanser（For maintenance）

Working Environment

Temperature: 10-30℃
Humidity≤ 70%
Pressure: 70-106kPa

Dimension

364mm×498mm×431mm

Net Weight

26.5kg

Performance

Parameters	Repeatability	Linearity
WBC	≤2.0% (4-15×10^9/L)	1.0-99.0×10^9/L
RBC	≤1.5% (3.5-6.0×10^{12}/L)	0.3-7.0×10^{12}/L
HGB	≤1.5% (110-180g/L)	20-999×10^9/L
PLT	≤4.0% (100-500×10^9/L)	20-240 g/L
MCV	≤1.0% (70～120 fL)	/

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Main Advantages

5 Diff of WBC

More precise and stable testing result

External Barcod Scanner

Convenient for reading the reagents barcode

Reagent Pre-heating Pool

Equipped with reagent preheating pool, to keep the reagent with constant temperature during testing.

USB Port

4 USB port for connecting printer, mouse, keyboard and barcode scanner.

Multiple Report Formats

Adjustable printing order of different parameters; PDF and JPG image format report available

Reagent Storage Warehouse

Convenient and safe

Lan Port Design

For wireless data transfer or internet

Support LIS

Independence operation system, support LIS data management.

3 Reagents for Testing

Simple and easy to operate and maintain the analyzer

Bottom Resistance

Side opening of the sample needle can avoid the sample absorbing port be blocked by sample tube bottom.

Diluent+LH Lyse+Diff Lyse

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User-frindly

Built-in Independence Operating System

- 10.4" LCD color touch screen
- No extra PC required

Powerful Data Management

- Flag info help diagnosis when result abnormal.
- 50,000 sample result storage with graphics, easy to transfer to PC side for analysis

Intelligent Monitoring

- Real-time displaying reagent residual volume and valid date
- Alarm when reagent insufficient, remind to replace
- Strictly monitor analyzer temperature, voltage, pressure and current

Smart Maintenance

- Automatical routine maintance, easy for users
- Hardware self-test, ensure the healthy operation of the instrument
- One-click for trouble shooting

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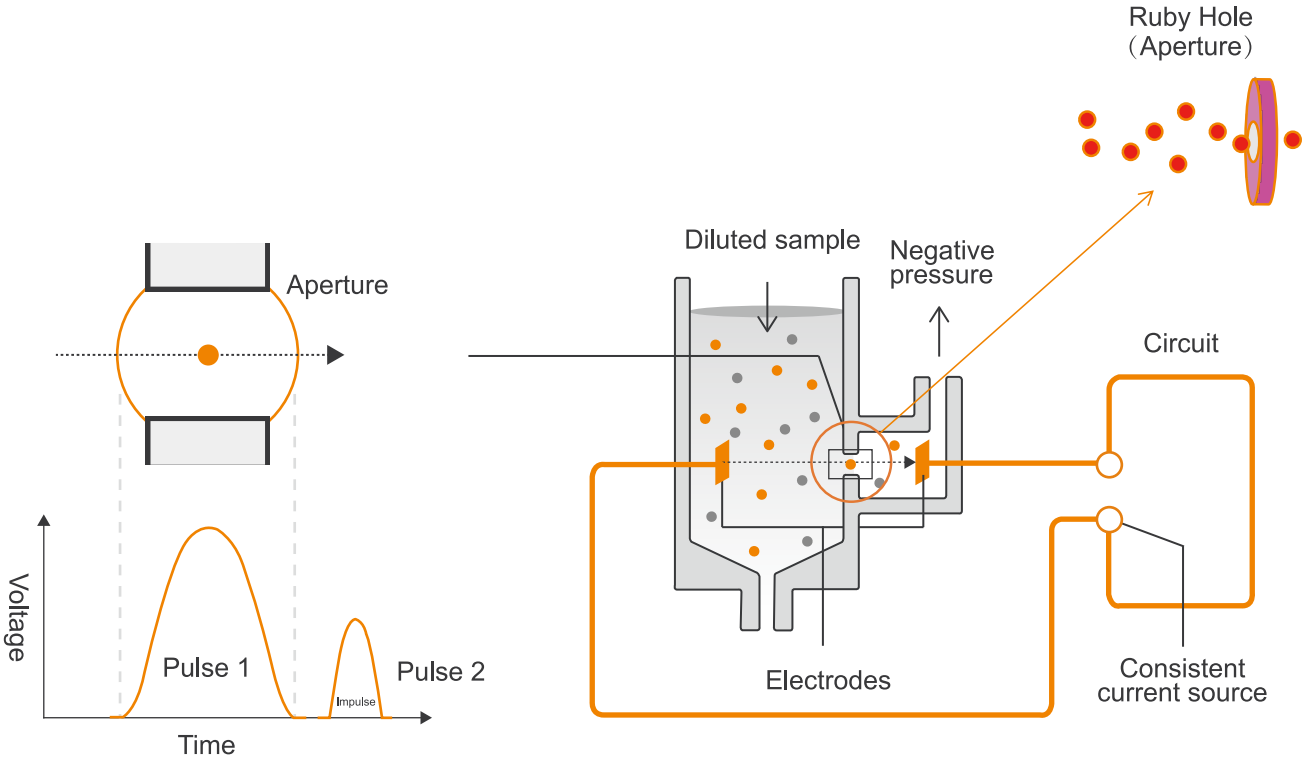
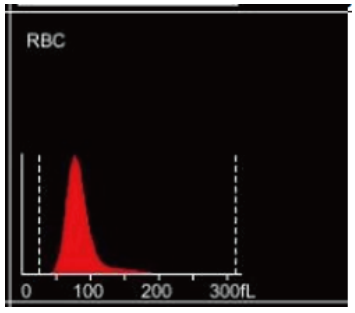
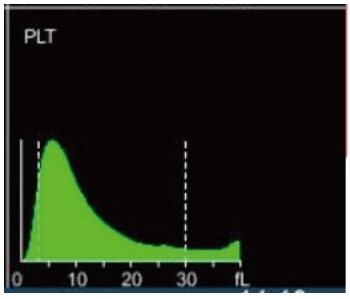
Working Principle

Electrical impedance method for determining the RBC and PLT data



When the cells in the diluted sample pass through the detection hole(Ruby hole) under the effect of constant negative pressure, the DC resistance between the electrodes will change, thus forming a proportional to the cell volume at both ends of the electrode Pulse signal.





- The number of pulses stands for number of cells passing through the small hole.
- The hight of the pulse stands for the volume of the cell.

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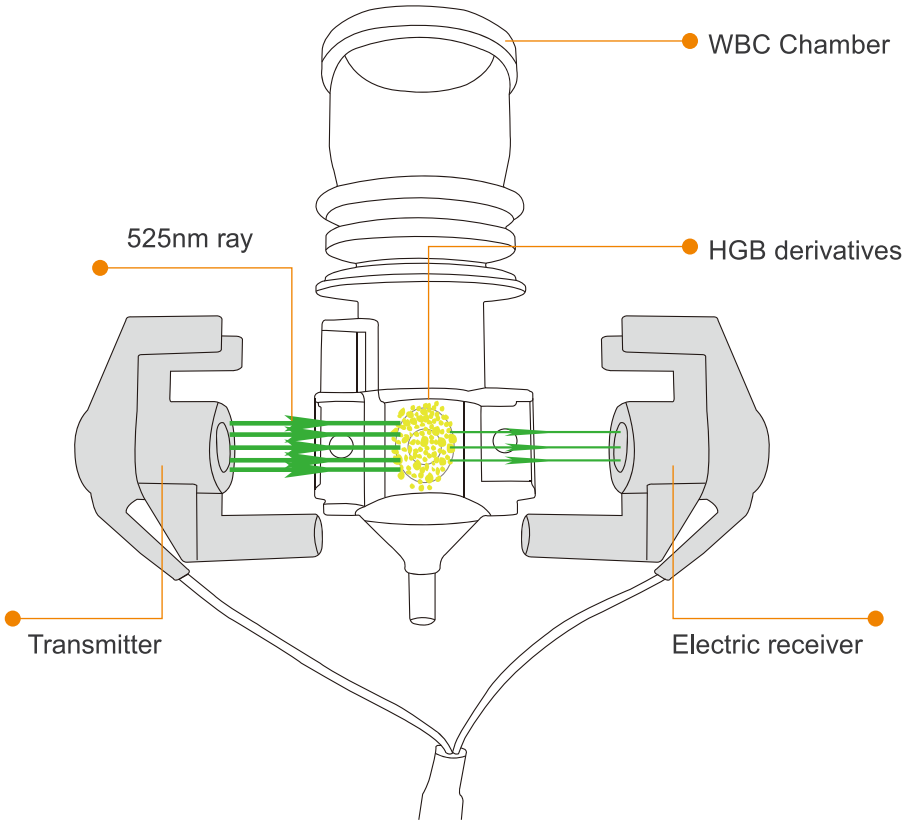
Working Principle

Colorimetric method for determining the HGB



The red blood cells dissolved by lyse reagent release HGB. HGB combines with the lyse reagent to form a **HGB derivatives**.

On one side of the colorimetric pool, let the LED light pass through a monochromatic light tube with a wavelength of **525 nm**, and then let the **filted monochromatic light** pass through the HGB derivatives. The electric receiver receives the transmitted light and converts the **optical signal** into an **electrical signal**.

By comparing the **electrical signal (voltage)** generated by different light transmittances before and after adding the sample, we can calculate the **HGB concentration**.

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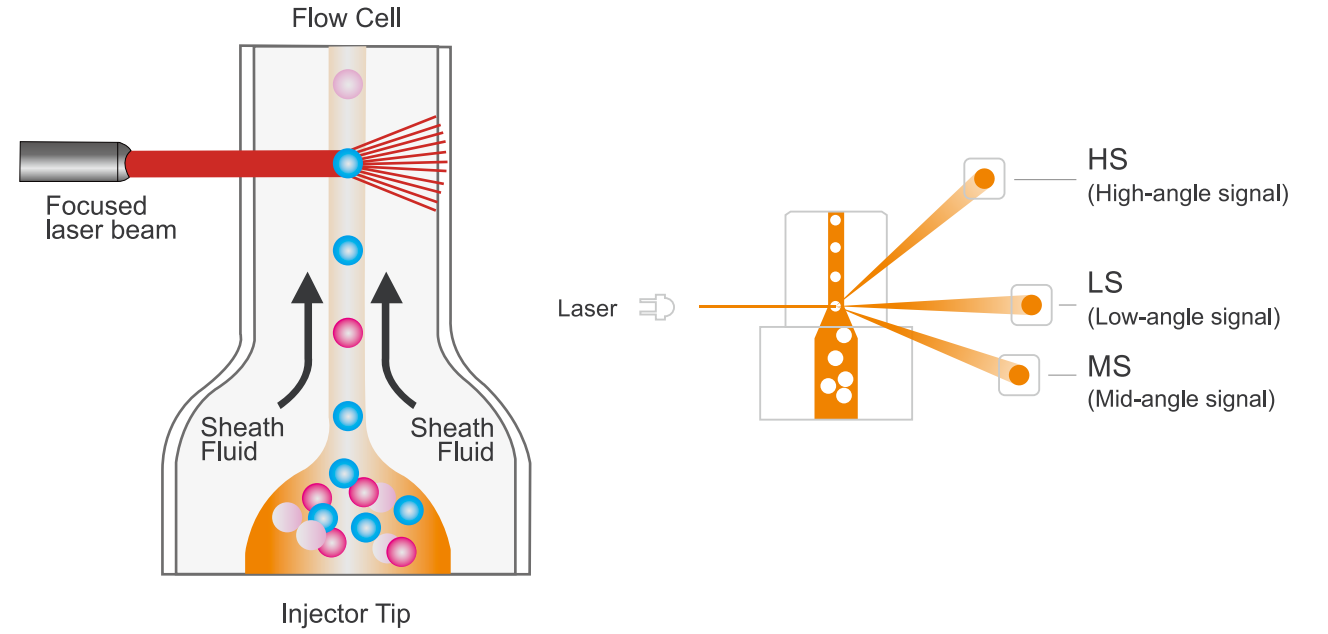
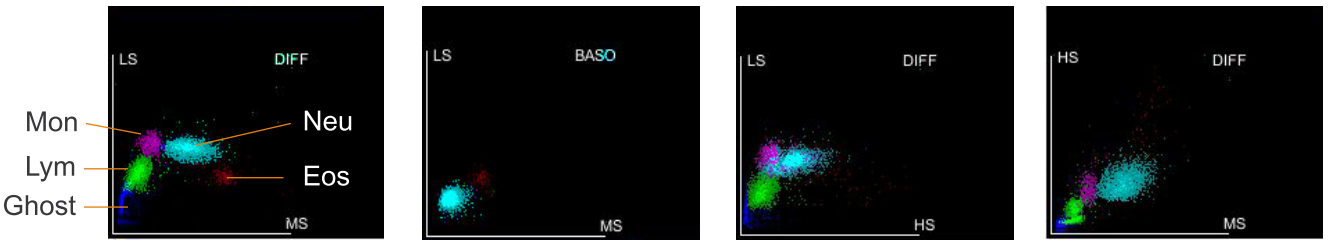
Working Principle

Laser-based flow cytometry for determining the WBC data

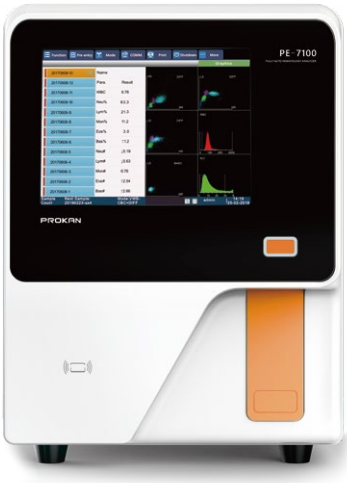




The blood cells are irradiated by the **laser** when they pass through one by one, the generated **scattered light** are related to the refractive index of the cell size, cell membrane and the internal structure.

- LS stands for the cell size
- MS stands for cell structure inner particles.
- HS stands for the changing of Cell membrane, nuclear membrane, cytoplasm

The photodiode receives these light signals and converts them into electrical signals, then a two-dimensional distribution map of blood cell size and internal cell information can be obtained.



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