MISPA HX 88
Automatic 6 Part Hematology Analyzer

INSTRUMENT INTRODUCTION

Detection Technology	Nucleic Acid Fluorescence Staining, Flow Cytometry, Tri-angle Laser Scatter Method for NRBC, RET, IPF and WBC 6-Part Diferential Analysis and WBC Counting Impedance Method for RBC and PLT Counting Cyanide Free Reagent for Hemoglobin Test
Detection Mode	CBC, DIFF, NRBC, RET, PLTF, AWS, SR
Sample Mode	Whole Blood Mode, Low Value Leukocyte Mode, Predilution Mode and Sample Research Mode
Sample Volume	Whole blood mode: 88 µL Predilution mode: 70 µL
Throughput	CBC+DIFF: 100T/H CBC+DIFF+RET+AWS: 71T/H CBC+DIFF+RET: 83T/H CBC+DIFF+RET+PLTF+AWS: 47T/H CBC+DIFF+RET+PLTF: 47T/H
Reporting Parameters	Leukocyte: WBC, NEUT(#,%), LYMPH(#,%), MONO(#,%), EO(#,%), BASO(#,%), IG(#,%) Erythrocyte: RBC, HGB, HCT, MCV, MCH, MCHC, RDW-SD, RDW-CV, NRBC(#,%) Platelets: PLT, PDW, MPV, P-LCR, P-LCC, PCT, IPF Reticulocytes: RET(#,%), IRF, LFR, MFR, HFR, RET-He
Auto Loader	Up to 50 sample position
Dimensions	670*760*810mm
Weight	76kg
Power Requirement	100-240V, ≤ 420VA, 50/60Hz
Interface	Support Bi-directional LIS (HL7)

Parameter	Linearity	Precision
WBC	0 ~ 500 x 10^9/L	≤ 2.5%
RBC	0 - 8.60 × 10^{12}/L	≤ 1.5%
HGB	0 - 260g/L	≤ 1.0%
PLT	0 ~ 5000 x 10^9/L	≤ 4.0%

MISPA HX
Bridging Innovation with Precision

Bridging Innovation with Precision

ISO 9001:2015
EN ISO 13485:2016   CE

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Advanced 3rd Generation Technology

Nucleic Acid Fluorescence Staining + Tri-angle Laser Scattering

SSL
Internal Cell Structure

SFL
RNA/DNA Information

FSL
Cell Size Information
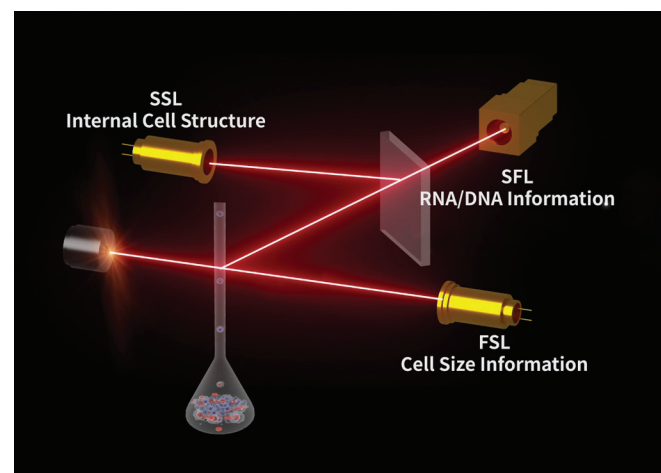
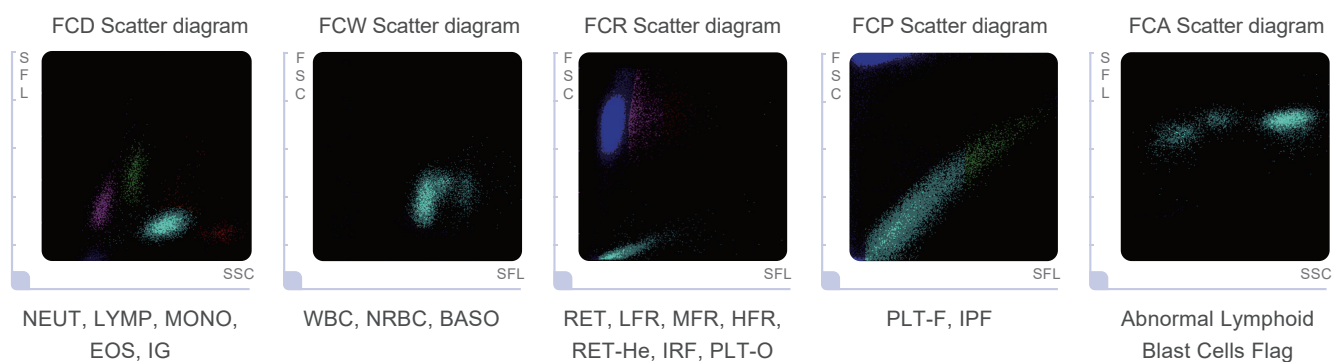|	2nd Gen Chemical Lysing	3rd Gen Fluorescent Staining
BASO		
LYMP		
MONO		
Granulocyte (EOS, NEUT)		
NRBC		
RBC		

The 2nd generation chemical staining reagents will only dye the enzymes/particles in cytoplasm. 3rd generation **Fluorescent Staining** solution will dye DNA or RNA blindly. Different cell has different concentration of DNA or RNA, and hence the depth of dying is different. The more DNA or RNA, the stronger fluorescent signal. Since the nucleic acid is the most specific part of cell, the **3rd Generation** is more sensitive to distinguish different leukocytes, especially the abnormal cells.
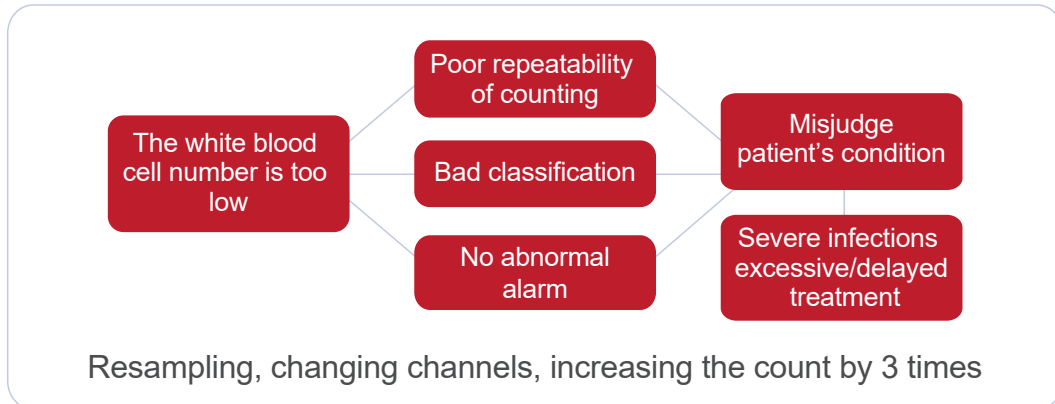
Combined with the **3rd Generation Nucleic Acid Fluorescence Staining** technology with flow cytometry, every passing cell in the flow cytometer is detected by three beams of light from three directions to get size, granularity and nucleic acid information simultaneously.

Tri-angle Laser Scattering: FSL (Forward Scattered Light) mainly reflects the size of the cells, SSL (Side Scattered Light) mainly reflects size and number of particle in cells SFL (Side Fluorescence Light) mainly reflects the concentration of nucleic acid.

Multiple channels

FCD Scatter diagram	FCW Scatter diagram	FCR Scatter diagram	FCP Scatter diagram	FCA Scatter diagram
NEUT, LYMP, MONO, EOS, IG	WBC, NRBC, BASO	RET, LFR, MFR, HFR, RET-He, IRF, PLT-O	PLT-F, IPF	Abnormal Lymphoid Blast Cells Flag

LW Mode (Low White Blood Cell)

The white blood cell number is too low → Poor repeatability of counting / Bad classification / No abnormal alarm → Misjudge patient's condition / Severe infections excessive/delayed treatment

Resampling, changing channels, increasing the count by 3 times

SR Mode (Sample Review)

Peritoneal fluid — Cerebrospinal fluid(CSF) — Pleural fluid — Synovial fluid

Body Fluid

Automatic Hematology Analysis line test speed up to 900T/H

Vertical (Cabinet) Assembly Line

Visual reagent management

- Built-in reagent position for dye
- Special loading design: Better separation and much safer

Efficient
- Up to100T/H (CBC+DIFF)
- Up to 83T/H (CBC+RET)
- Up to 83T/H (CBC+DIFF+RET)
- Up to 47T/H (CBC+DIFF+RET+PLTF)

Auto loader

- 50 position
- Built-in barcode for sample tube
- Automatically rotate and adjust the barcode position for identification

Automatic rerun and reflex

- Return the sample racks for an automatic rerun or reflex check
- Comparative analysis of multiple outcomes in the same patient