

A young child with blonde hair, wearing a red shirt, is lying on their back on a lush green lawn. They are smiling broadly and holding a dandelion seed head in their right hand. The background is a clear blue sky.

A Cute 5-part

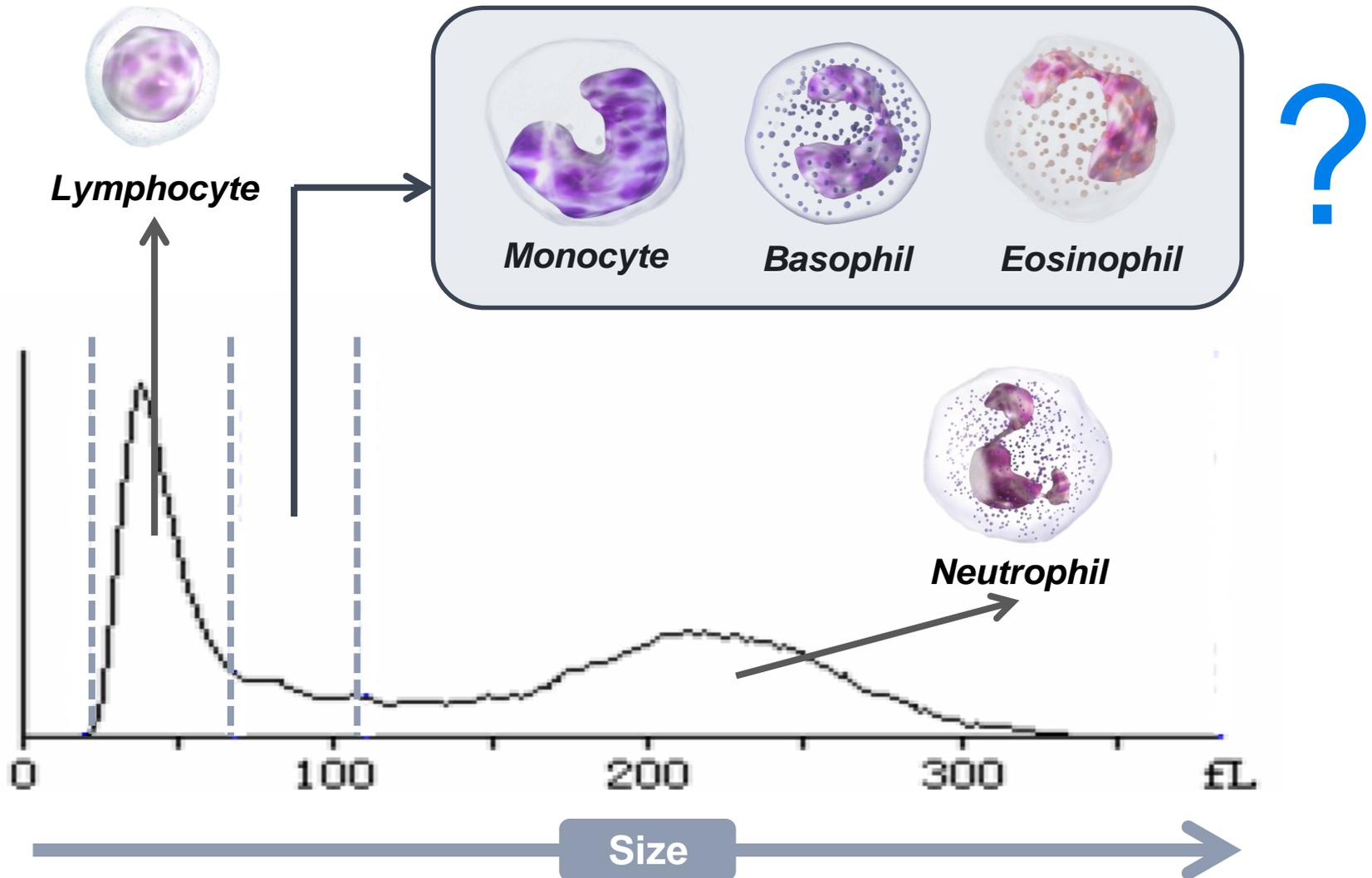
BC-5130 introduction

International Sales & Marketing, IVD Division

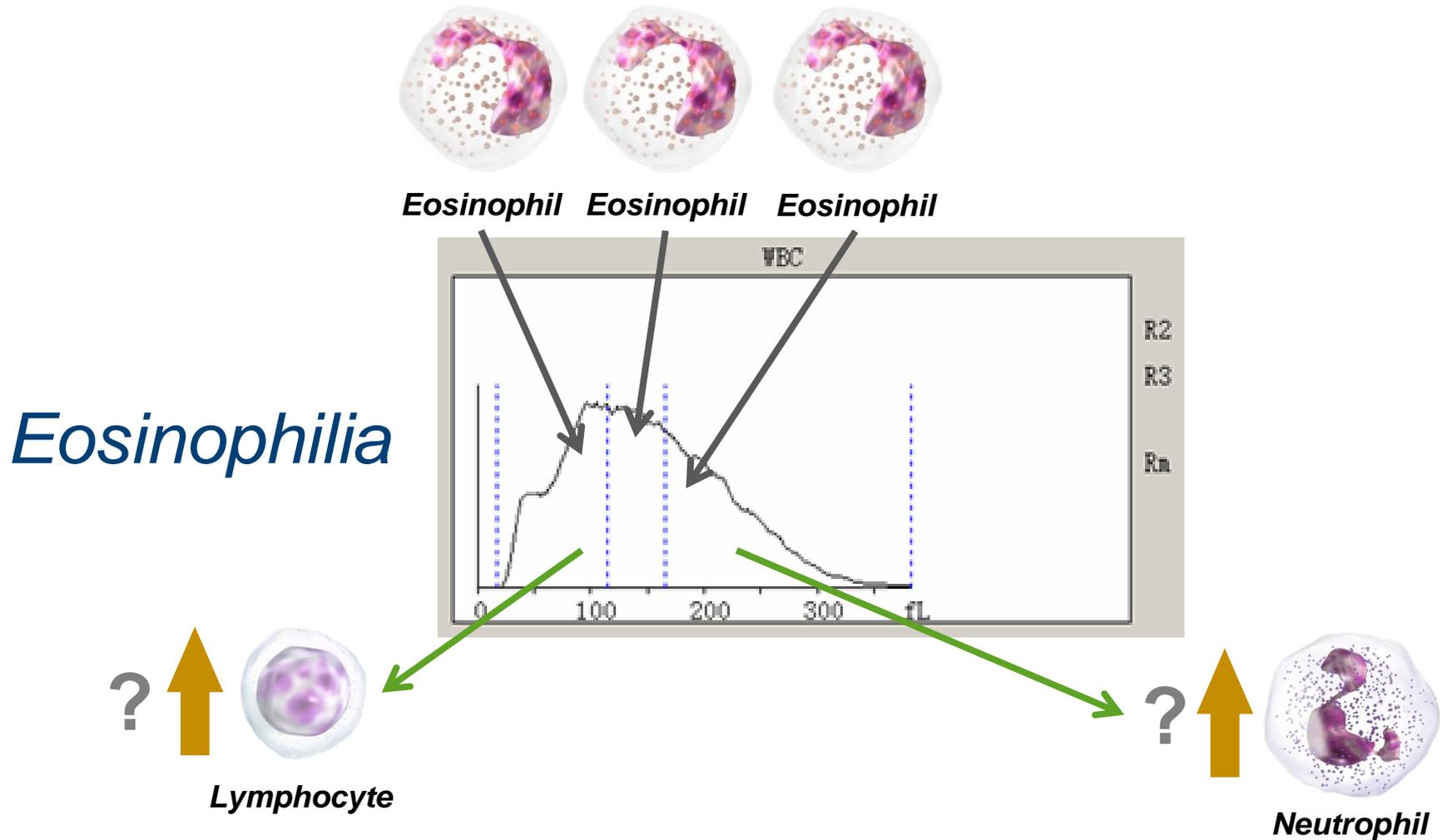
mindray

Why do we need 5-part analyzer?

3-part: less WBC differential results



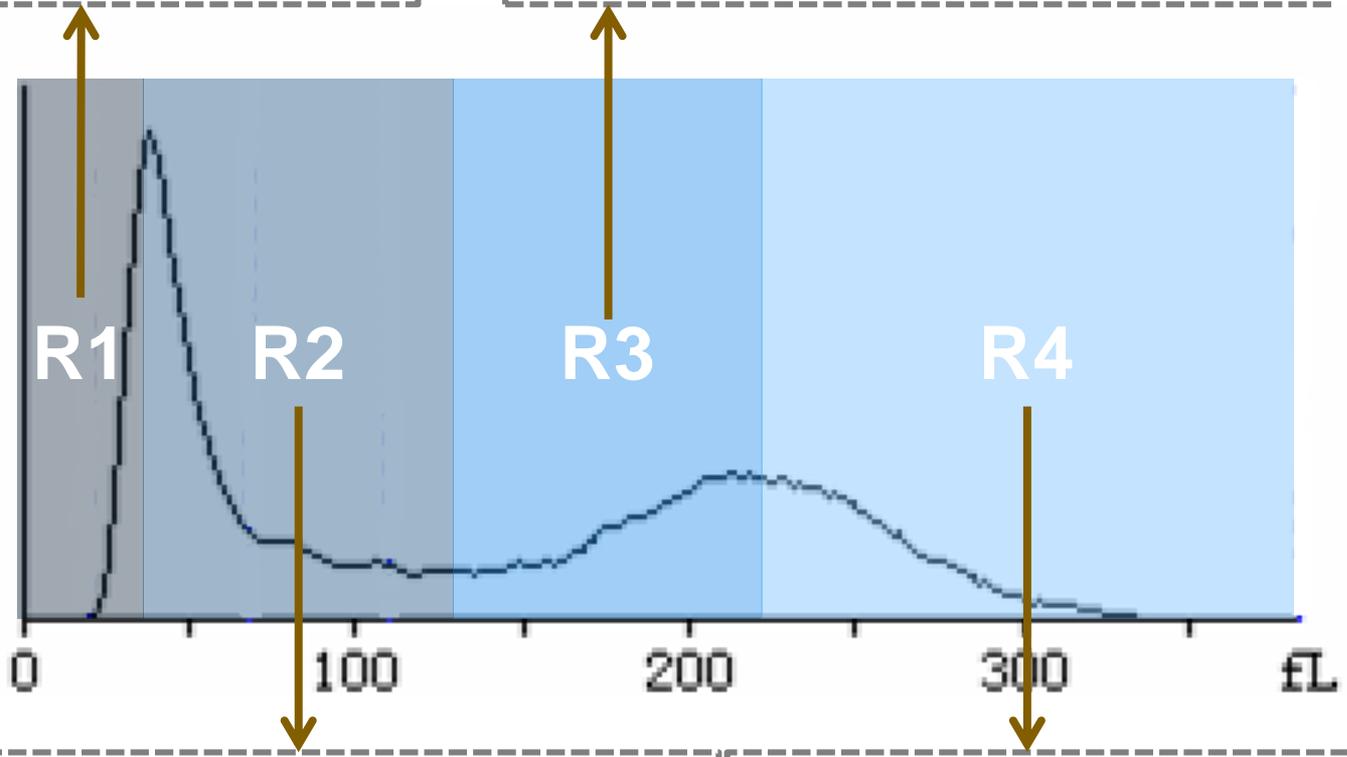
3-part: subject to interference by abnormal cells



3-part: cryptic flags

R1: Indicates abnormality on the left side of the lymphocyte peak.

R3: Indicates abnormality between the mid-sized cell area and the granulocytes.



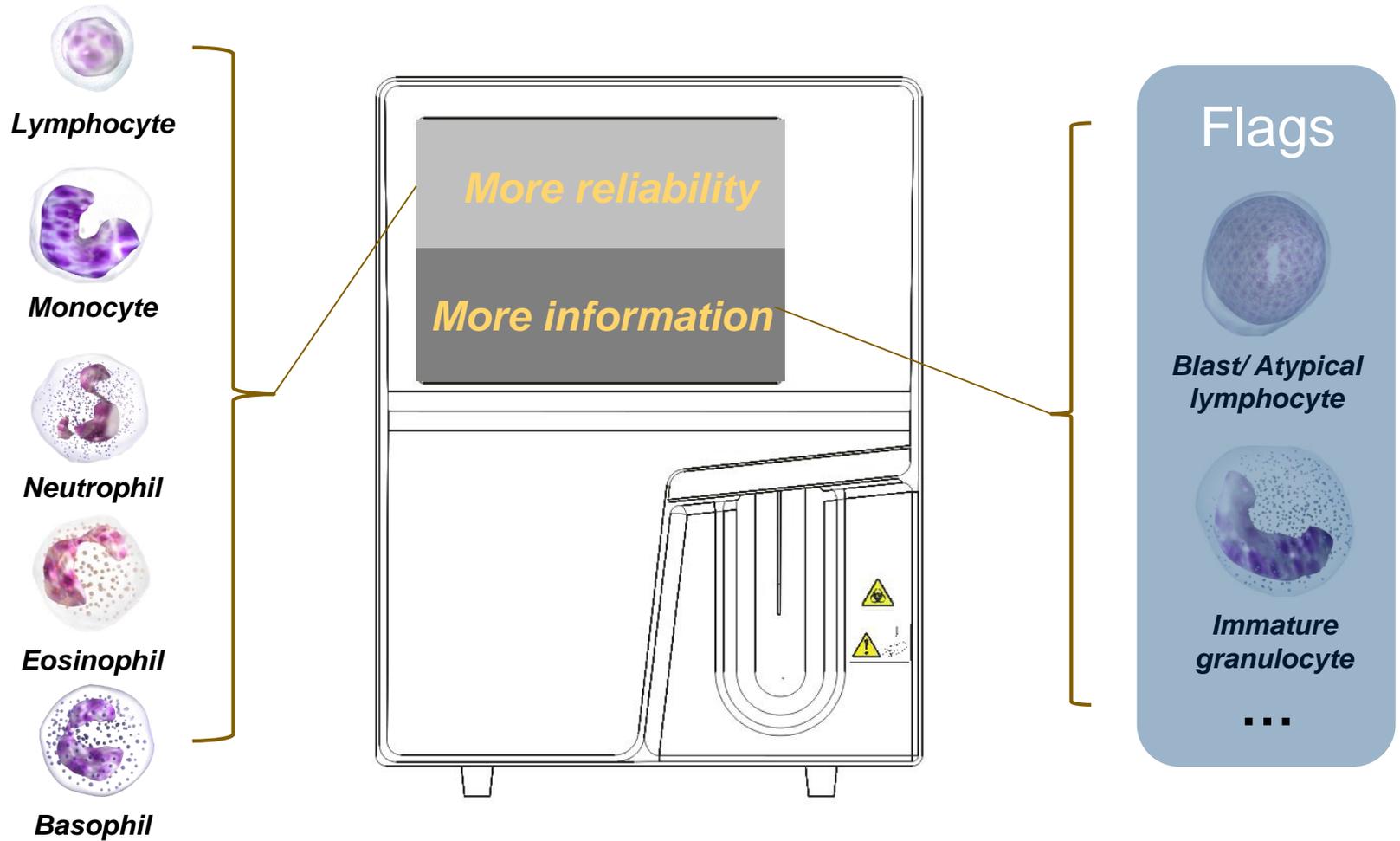
R2: Indicates abnormality between the lymphocyte peak and the mid-sized cell area.

R4: Indicates abnormality on the right side of the neutrophilic granulocyte peak.

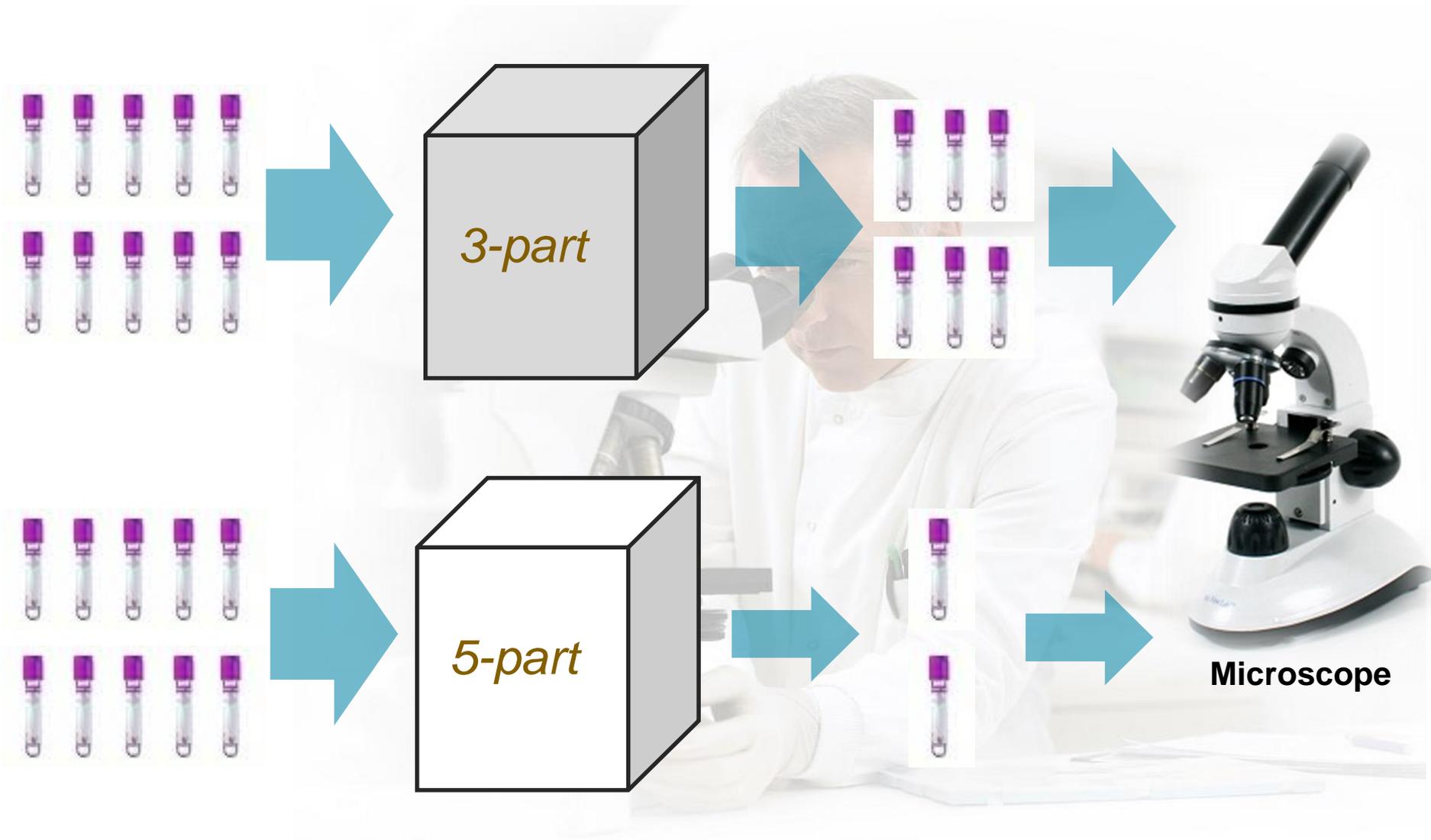
The limitation of 3-part



5-part: more data & specific flags



5-part: less manual review



Why do we need BC-5130?

BC-5130 Specifications

- 5-part differentiation, **25** reportable parameters + **10** research parameters, **3** scattergrams and **3** histograms
- Laser scatter + Chemical dye + Flow cytometry technology
- **Tri-angle laser scatter**, have better performance on high Eosinophil sample
- Independent channel and optical method for Basophil measurement
- Powerful capability to flag abnormal cells
- Support whole blood mode for capillary sample
- **60** samples per hour
- **10.4** inch large TFT touch screen
- Large storage capacity: up to **150,000** samples
- Support bi-directional LIS



BC-5130 target customers



- Small labs & clinics
Current users of 3-part or small 5-part products
- Children hospitals
Especially for the neonate who is hard to collect blood
- Medium & large labs & core labs
Beside 6800 & track system for STAT and pediatric using

Compact

Utility
CUTE

Technology

Efficient

Compact

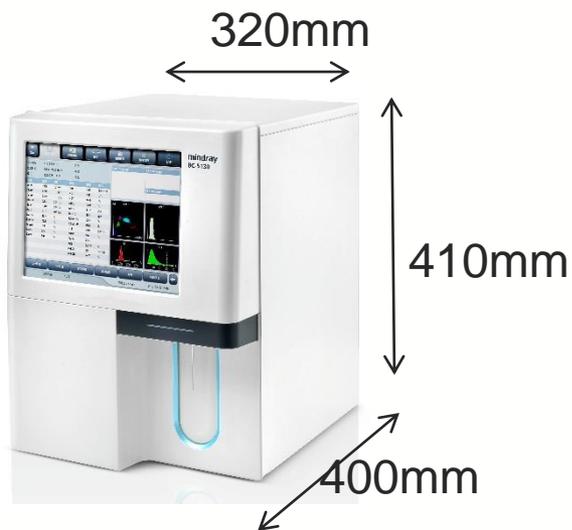


Small dimensions

BC-5130

VS

BC-2800



Technology improvement

Why can we make BC-5130 so compact?



Instrument system:

Innovative reaction system, highly integrated electronic boards and optimized liquid handling systems

The innovative optics



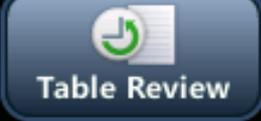
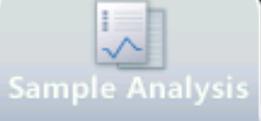
Optical module:

Innovative and compact semi-conductor laser source, whose size is less than 1/3 of other 5-part hematology analyzers from Mindray.

Built-in lyse reagents

- Two kinds of lyse reagents are located inside BC-5130, help the small labs to save spare space.

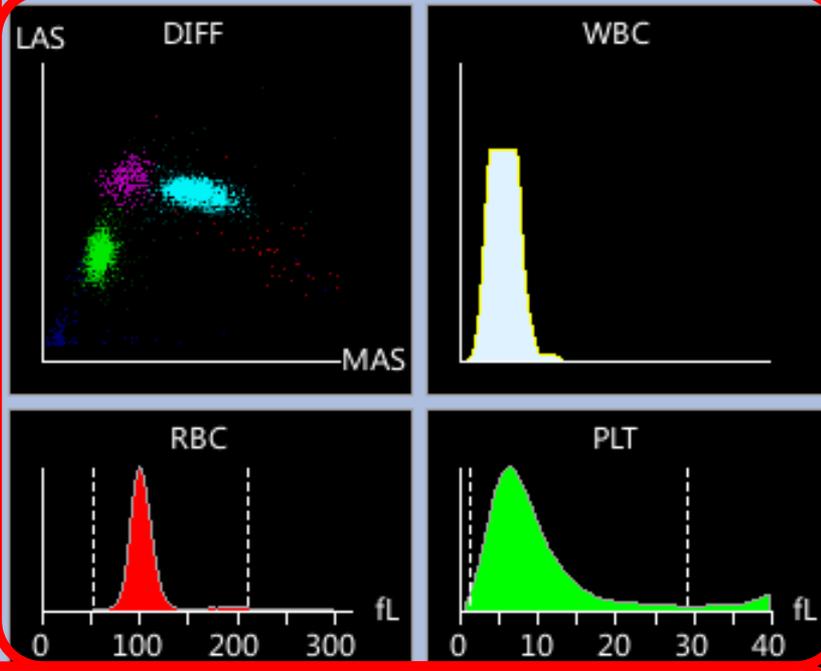




Sample ID 9 Name xueliang zang
 Time 03-03-2014 15:48 Age
 Mode WB-CBC+DIFF Gender

Parameter	Result	Unit	Parameter	Result	Unit
WBC	5.50	10 ³ /uL	RBC	4.70	10 ⁶ /uL
Neu#	3.03	10 ³ /uL	HGB	14.7	g/dL
Lym#	2.07	10 ³ /uL	HCT	42.7	%
Mon#	0.33	10 ³ /uL	MCV	90.9	fL
Eos#	0.05	10 ³ /uL	MCH	31.4	pg
Bas#	0.02	10 ³ /uL	MCHC	34.6	g/dL
Neu%	55.0	%	RDW-CV	12.1	%
Lym%	37.6	%	RDW-SD	40.1	fL
Mon%	6.1	%	PLT	224	10 ³ /uL
Eos%	0.9	%	MPV	8.9	fL
Bas%	0.4	%	PDW	15.6	
*ALY#	0.01	10 ⁹ /L	PCT	0.199	%
*ALY%	0.2	%	P-LCC	43	10 ³ /uL
*LIC#	0.02	10 ⁹ /L	P-LCR	19.1	%
*LIC%	0.5	%			

WBC Message
 RBC Message
 PLT Message



Previous Next Other Para. Edit Result Validate Special Info. ←

Intelligent flagging

WBC Abnormal

Immature cell?

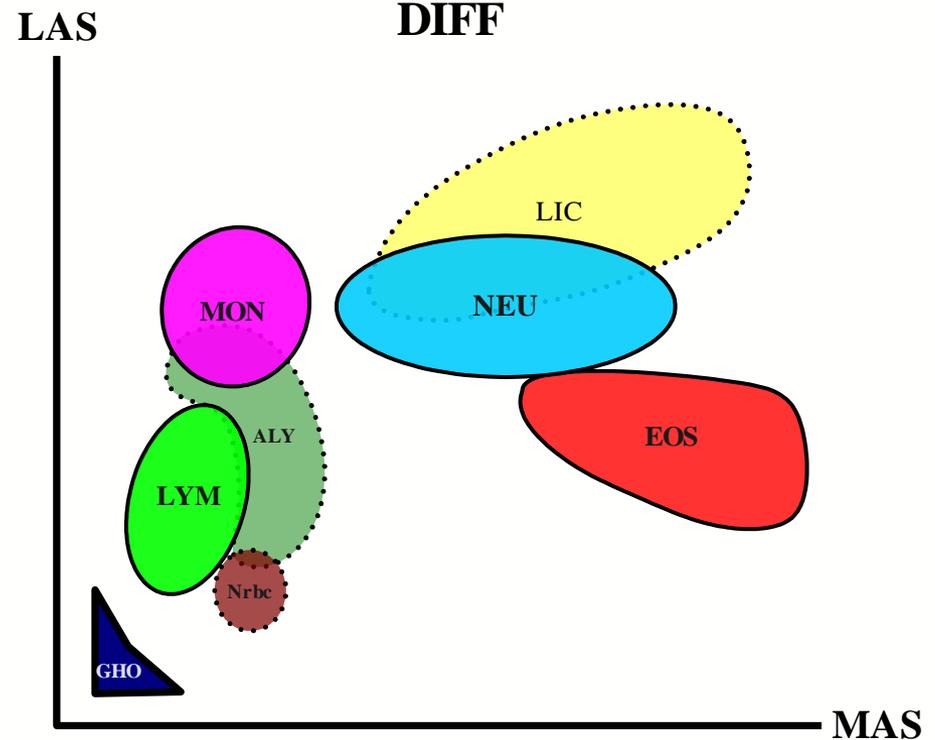
Abn/Atypical Lympho?

RBC Distribution Abnormal

Anemia

HGB Abn/Interfere

PLT Distribution Abnormal



Intelligent flagging

Flag Region	Flag Messages	Indication	Judging Criteria
WBC Flag	WBC Abnormal *1	Interference of PLT clump or NRBC to WBC count and differential may exist	The DIFF and BASO channels are unproportionate
	Immature cells? *2	Immature cells or blasts may exist	Many scatter-points in the immature cell area of the scattergram
	Abn./Atypical Lym? *3	Abnormal lymphocytes or atypical lymphocytes may exist.	Many scatter-points in the abnormal/ atypical lymphocytes area of the scattergram
	Leucopenia	Low WBC analysis results	WBC < 2.50×10 ⁹ /L
	Leucocytosis	High WBC analysis results	WBC > 18.00×10 ⁹ /L
	Neutropenia	Low neutrophils analysis results	NEUT# < 1.00×10 ⁹ /L
	Neutrophilia	High neutrophils analysis results	NEUT# > 11.00×10 ⁹ /L
	Lymphopenia	Low lymphocytes analysis results	LYMPH# < 0.80×10 ⁹ /L
	Lymphocytosis	High lymphocytes analysis results	LYMPH# > 4.00×10 ⁹ /L
	Monocytosis	High monocytes analysis results	MONO# > 1.50×10 ⁹ /L
	Eosinophilia	High eosinophils analysis results	EO# > 0.70×10 ⁹ /L
	Basophilia	High basophils analysis results	BASO# > 0.20×10 ⁹ /L
Pancytopenia	WBC, RBC and PLT low	Wbc < 4.0×10 ⁹ /L and Rbc < 3.5×10 ¹² /L and Plt < 100×10 ⁹ /L	

*1:R/? Parameters labeled: WBC, affected differential parameters.

*2:R/? Parameters labeled: Neu%#, Mon%#, Bas%#.

*3:R/? Parameters labeled: Lym%#, Mon%#, Bas%# (possible).

Intelligent flagging

Flag Region	Flag Messages	Indication	Judging Criteria
RBC Flag	RBC Histogram Abn.*1	Possible presence of microcytes, macrocytes, anisocytosis, RBC agglutination and dimorphic histogram	The distribution of RBC histogram is abnormal
	HGB Abn./Interfere? *2	HGB abnormal or RBC agglutination, or interference may exist (e.g., WBC high)	MCHC > 380 g/L or HGB interference
	Microcytosis	MCV low	MCV < 70fL
	Macrocytosis	MCV high	MCV > 110fL
	Anemia	Anemia	HGB < 90g/L
	Erythrocytosis	RBC high	RBC > 6.5×10 ¹² /L

*1:R/? Parameters labeled: RBC, HCT, RDW—CV, RDW—SD, etc., the question mark position of RBC parameters can be different under different situations.

*2:R/? Parameters labeled: HGB, MCH, MCHC.

Intelligent flagging

Flag Region	Flag Messages	Indication	Judging Criteria
PLT Flag	PLT Histogram Abn.*1	Possible presence of microcytes, red blood cell debris, giant PLT or PLT clump	PLT/RBC is not clearly differentiated in the PLT scattergram
	Thrombopenia	PLT low	PLT < 60×10 ⁹ /L
	Thrombocytosis	PLT high	PLT > 600×10 ⁹ /L

*1:R/? Parameters labeled: PLT, MPV, PDW, PCT, PLCR, PLCC, etc.

Software utility improvement

❑ Improved sleep and screensaver management

- ✓ The instrument will not enter into sleep mode when users are operating on the internal touch screen
- ✓ Animated screensaver extend the life of internal touch screen

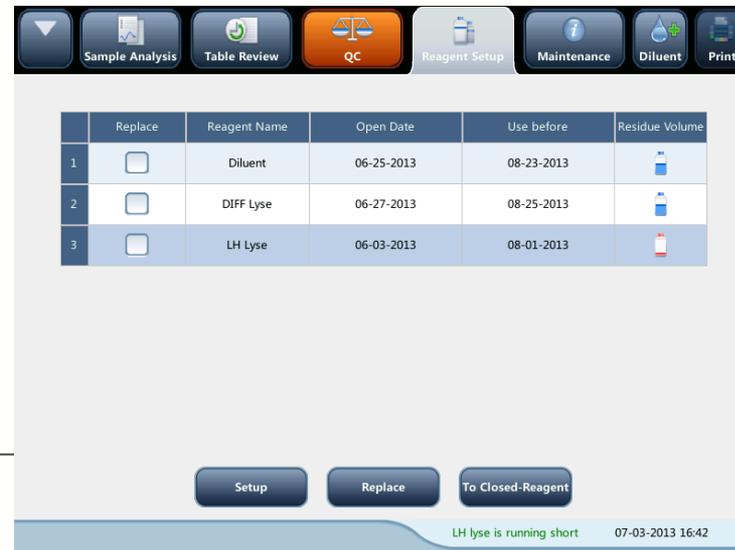
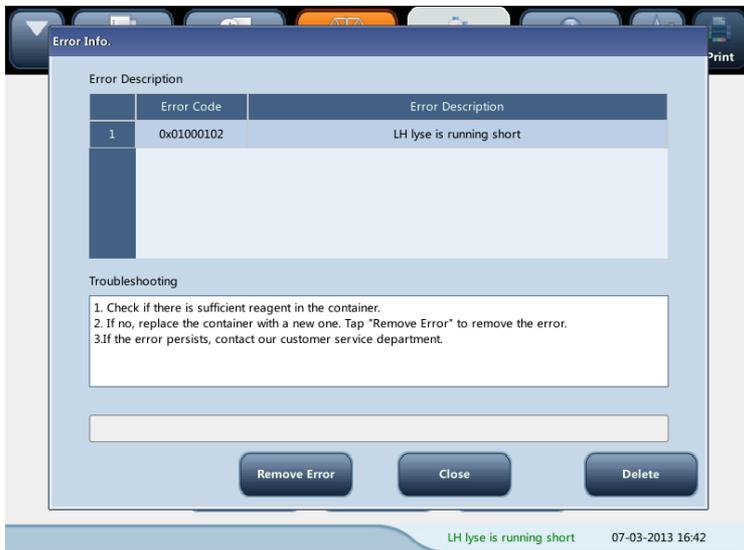
❑ Integrated software interface

- ✓ The sample probe can still aspirate sample when users are reviewing graphs.
- ✓ Test result and flag information are shown in one screen.

Software utility improvement

❑ Error information

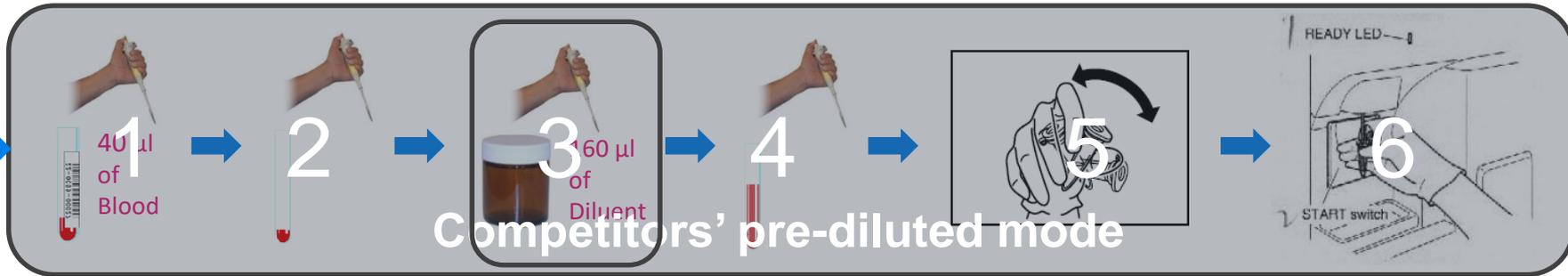
- ✓ Pop up the dialog box of instrument error automatically, users don't need to click the error bar
- ✓ Display the reagent residual in graphs, which is more intuitive and friendly
- ✓ The label page of reagent whose management is abnormal will change color automatically, to give users oriented tips



3 counting modes



Unique capillary whole blood mode

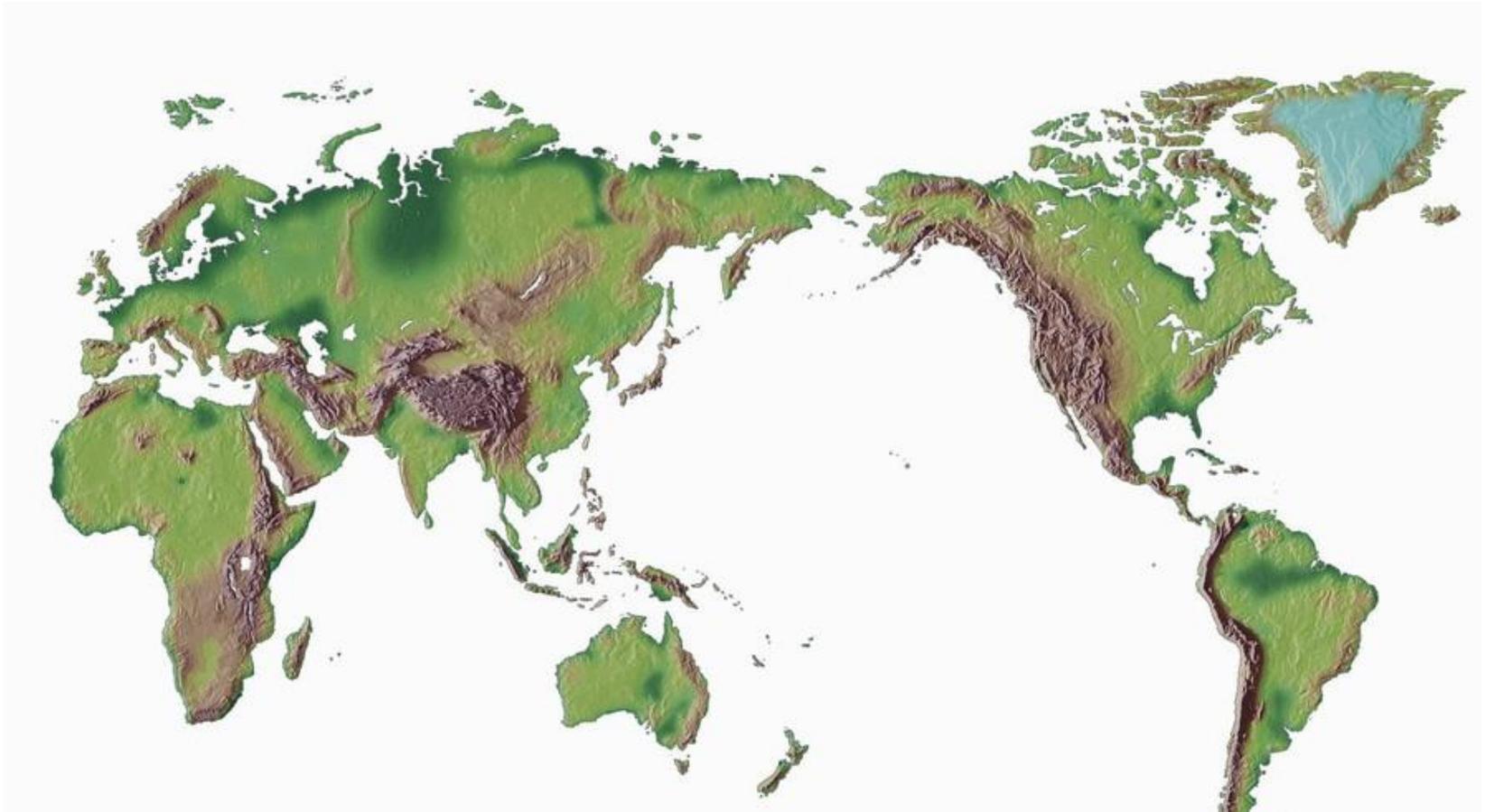


Capillary blood collection



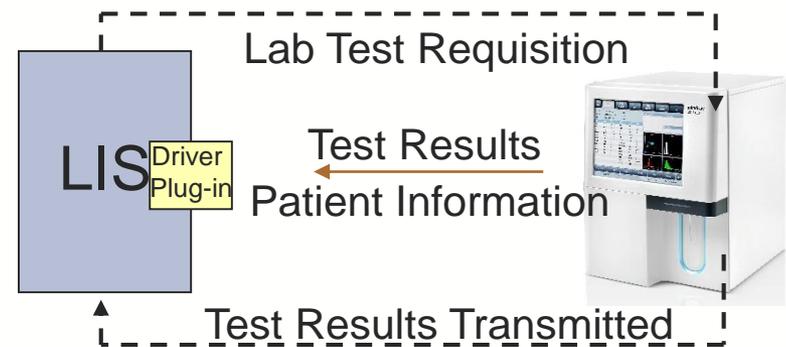
Working temperature

- ❑ BC-5130 is the first 5-part hematology analyzer in the world which supports 10-30 degrees working temperature, has a better performance on applicability.



Expansion feature

- ❑ 4 USB ports located on its left side, permit BC-5130 user convenient data transmission as well as connections to printers, keyboard, mouse, barcode scanner, etc.
- ❑ BC-5130 supports bi-directional LIS with test results and patient information. Additionally, HL7 protocol is supported.



How to choose printers on BC-5130

Choosing printers on BC-5130 have below options.

- Select the thermal printer which is the standard configuration.
- All HP PCL6 printers, such as HP Laser Jet P1505n, HP Office Jet Pro K5300 and HP LaserJet P1606dn, etc.
- Using Mindray "printer tool" software installed on PC, connecting the PC to a printer to check if it's compatible for BC-5000/5150.
- Connecting BC-5000/5150 to DMS in PC and connecting printer to PC.
- Some printers could be added if sales or engineers provide the local printer list, but it is better to use the above 4 options firstly since it is not sure for Mindray could find the same printers in China for validation.



Printer tool.7z

Some printer examples



Thermal printer



HP Laser Jet P1505n



HP LaserJet P1606dn



HP Office Jet Pro K5300



Lenovo LJ2650DN/LJ3650DN
Lenovo LJ3600D



Lenovo LJ2250/LJ2250N



EPSON LQ-590K

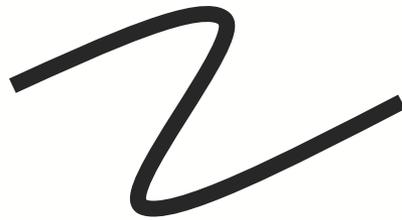
Updating.....

Thermal printer

USB Cable



Thermal Printer



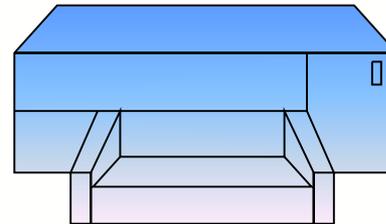
BC-5130

PCL6 printers



BC-5130

USB Cable



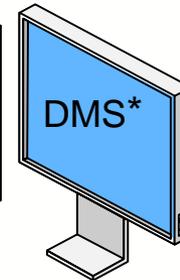
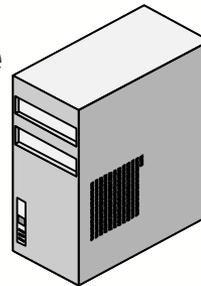
PCL6 Printer

Data Management Software



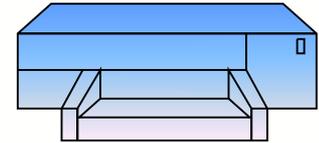
BC-5130

Network Cable



Computer

USB Cable



Printer

* DMS: Data Management Software

Original reagent, QC and Calibrator

Original reagent

Routine reagent **2** YEAR
SHELF LIFE

- ✓ M-52 D diluent(20L)
- ✓ M-52 DIFF lyse(500mL)
- ✓ M-52 LH lyse(100mL)

Maintenance reagent **1** YEAR
SHELF LIFE

- ✓ Probe cleanser(50mL)

QC

- ✓ BC-5D

Calibrator

- ✓ SC-CAL plus



Complete customization on report files

Report Headline

Patient information

Insert lab logo or patient photo

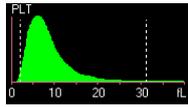
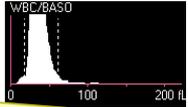
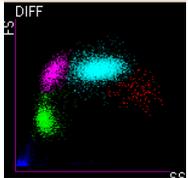
Customize results:
parameters
graphics
flags
reference range
microscopic

Hematology Report

Patient Name: Tom Jones Age: 42 Gender: Male
Mode: CBC+DIFF Sample ID: 12345678901234567890
Test time: 2008-10-10 14:12:34
Remark: Normal



Parameter	Result	Unit	Reference range
WBC	122.45E	10 ³ /uL	4.00 - 10.00
Neu%	122.45E	10 ³ /uL	4.00 - 10.00
Lym%	122.45E	10 ³ /uL	4.00 - 10.00
Mon%	122.45E	10 ³ /uL	4.00 - 10.00
Eos%	122.45E	10 ³ /uL	4.00 - 10.00
Bas%	122.45E	10 ³ /uL	4.00 - 10.00
Neu#	122.45E	10 ³ /uL	4.00 - 10.00
Lym#	122.45E	10 ³ /uL	4.00 - 10.00
Mon#	122.45E	10 ³ /uL	4.00 - 10.00
Eos#	122.45E	10 ³ /uL	4.00 - 10.00
Bas#	122.45E	10 ³ /uL	4.00 - 10.00
RBC	122.45E	10 ³ /uL	4.00 - 10.00
HGB	122.45E	10 ³ /uL	4.00 - 10.00
HCT	122.45E	10 ³ /uL	4.00 - 10.00
MCV	122.45E	10 ³ /uL	4.00 - 10.00
MCH	122.45E	10 ³ /uL	4.00 - 10.00
MCHC	122.45E	10 ³ /uL	4.00 - 10.00
RDW-CV	122.45E	10 ³ /uL	4.00 - 10.00
RDW-SD	122.45E	10 ³ /uL	4.00 - 10.00
PLT	122.45E	10 ³ /uL	4.00 - 10.00
MPV	122.45E	10 ³ /uL	4.00 - 10.00
PDW	122.45E	10 ³ /uL	4.00 - 10.00
PCT	122.45E	10 ³ /uL	4.00 - 10.00



Easy and convenient maintenance

The screenshot displays a software interface for a laboratory instrument. At the top, there is a navigation bar with several icons: a dropdown arrow, 'Sample Analysis', 'Table Review', 'QC', 'Reagent Setup', 'Maintenance', 'Diluent', and 'Print'. Below this, there are three tabs: 'Maintenance', 'Cleaning', and 'Fluidics'. The 'Maintenance' tab is active, showing a grid of six maintenance tasks, each with a 'Latest maintenance:succeeded' status and a timestamp. A yellow callout box points to the 'Unclog Flow Cell' task, stating '“Double-click” maintenance'. At the bottom right of the interface, the date and time '07-03-2013 16:46' are displayed.

Maintenance Task	Latest maintenance:succeeded
Clean Fluidics	06-27-2013 09:41
WBC Bath	2013-07-02 16:21
RBC Bath	2013-07-02 16:22
Clean Flow Cell	2013-04-22 10:39
Sample Probe	2013-04-03 16:25
Unclog Flow Cell	2013-07-02 14:45

“Double-click” maintenance

07-03-2013 16:46

Built-in multi-language Interfaces

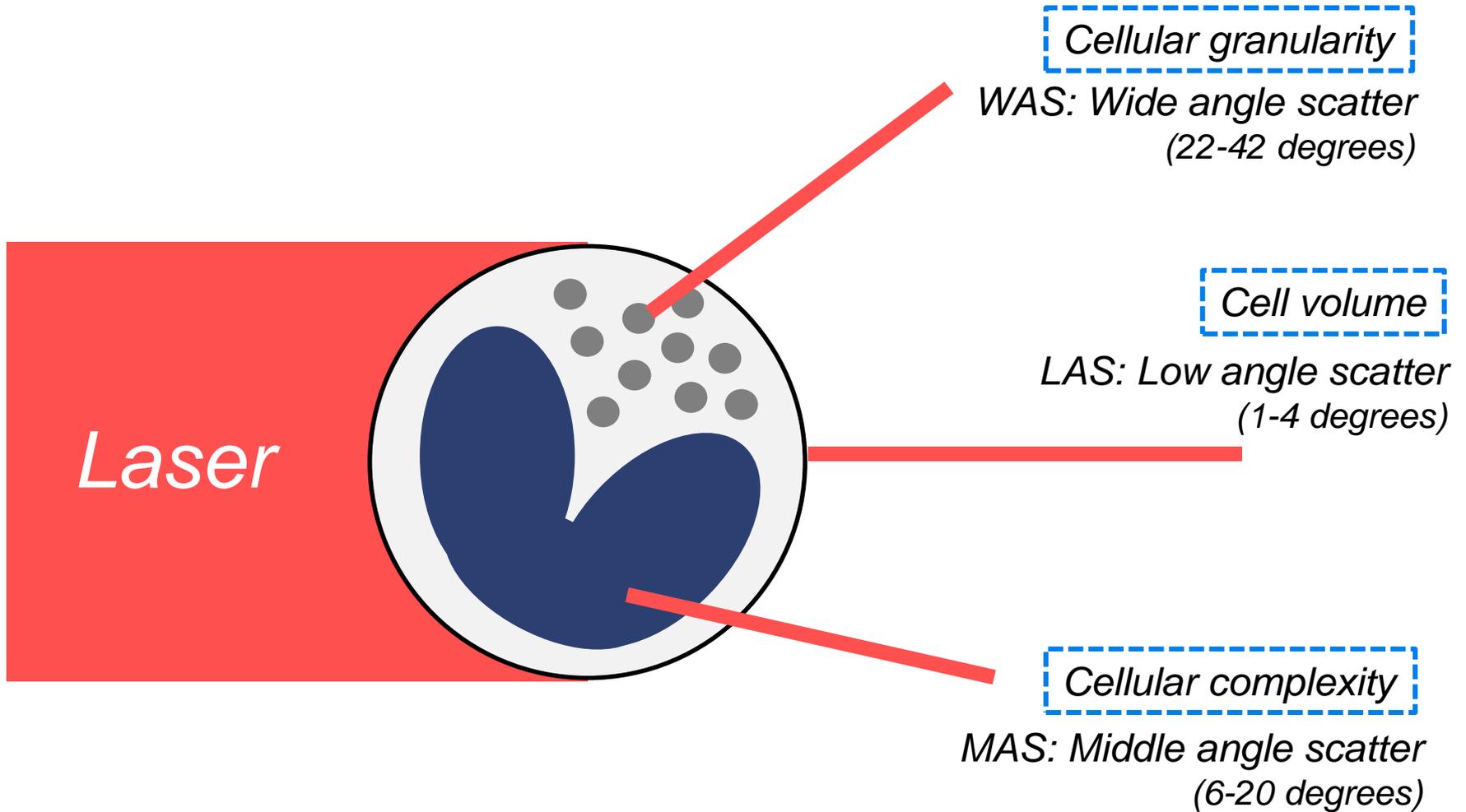
- Chinese, English, French, Spanish, Portuguese and Russian are ready now.



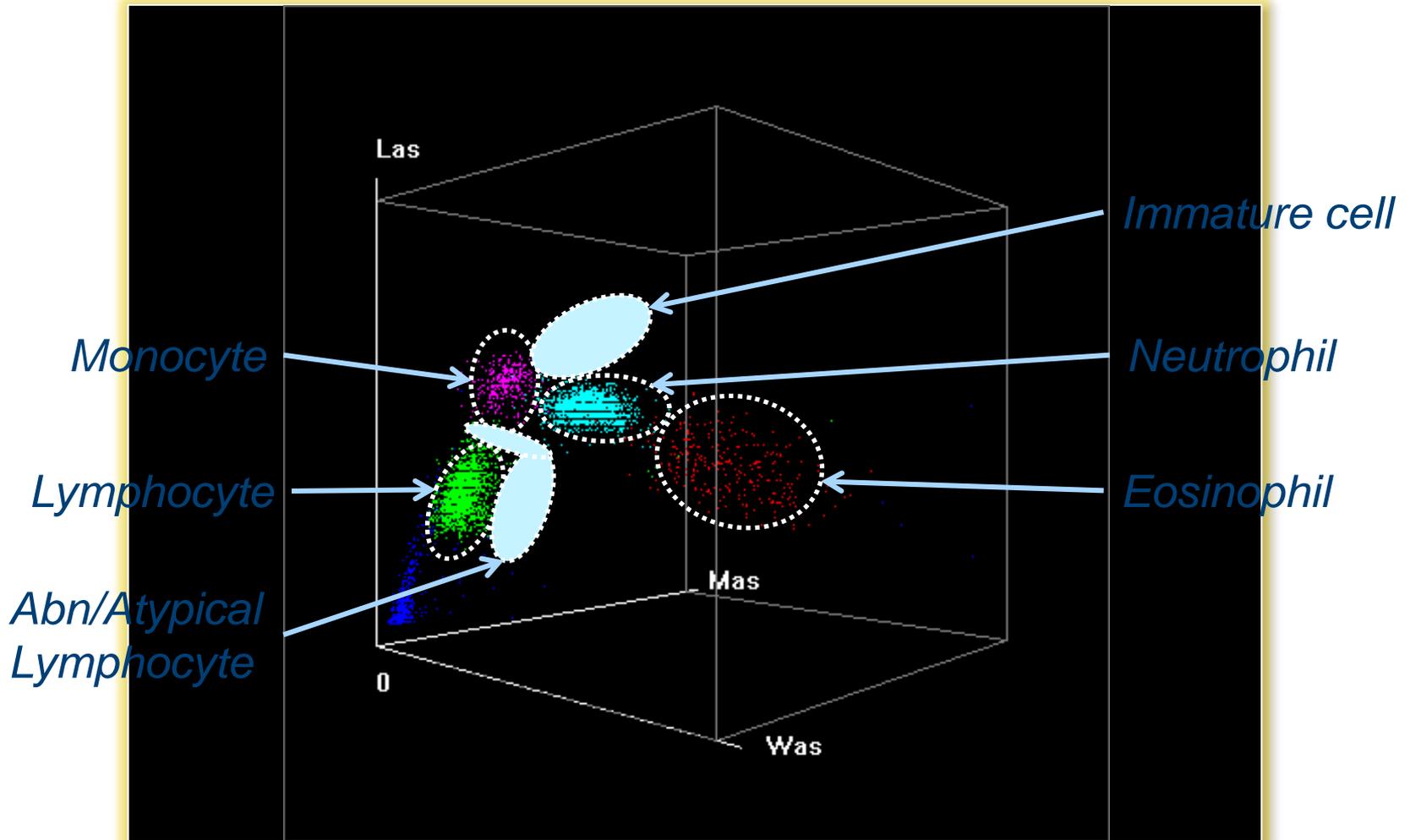
Technology



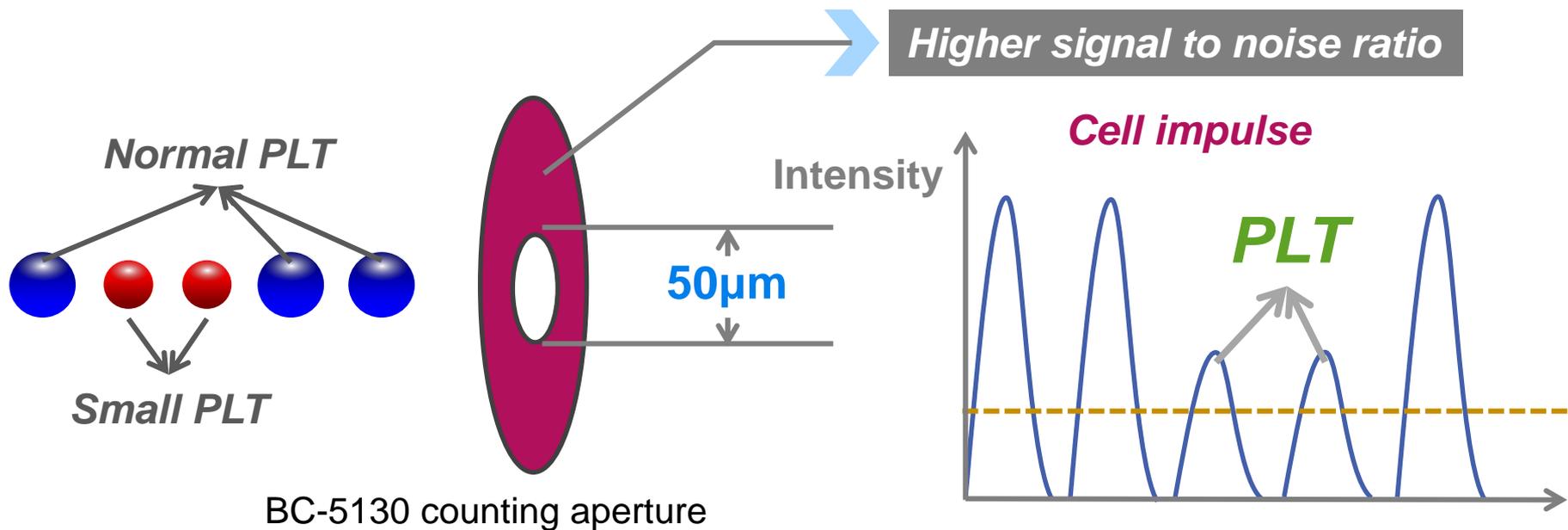
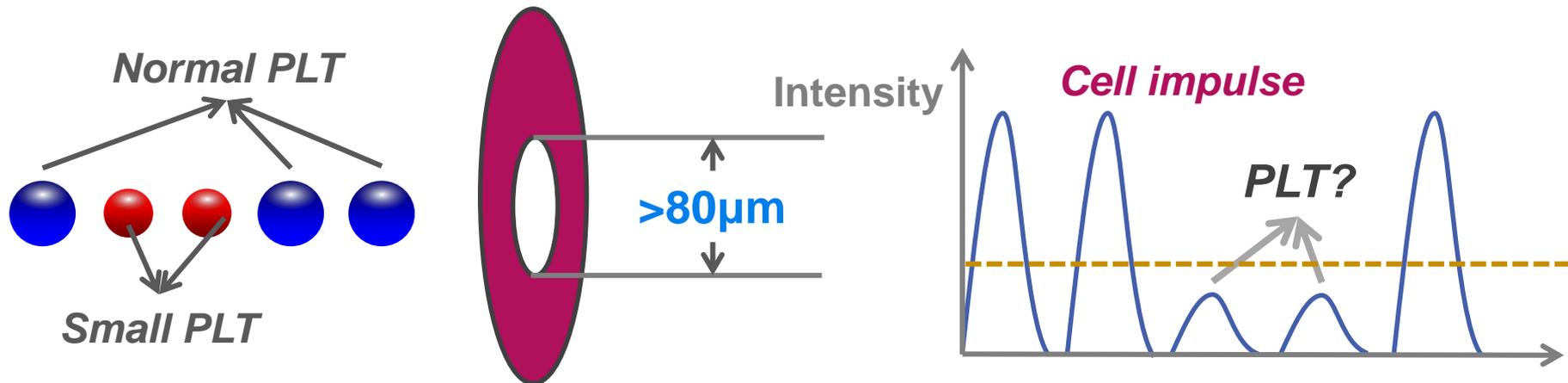
State-of-the-art technology



3D cell analysis

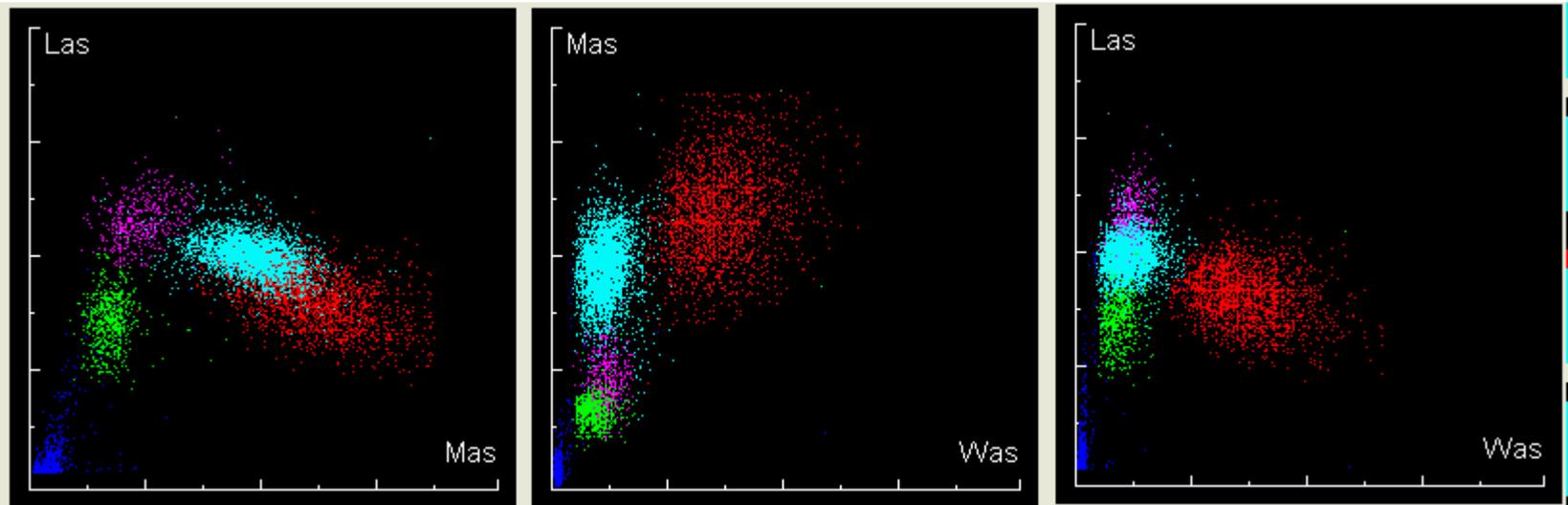


Smaller counting aperture

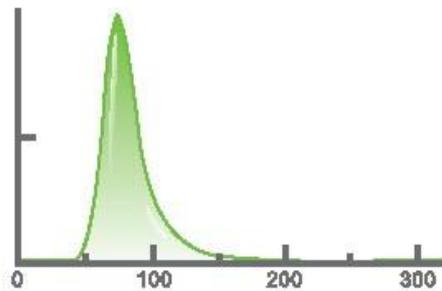


Better performance for Eosinophil

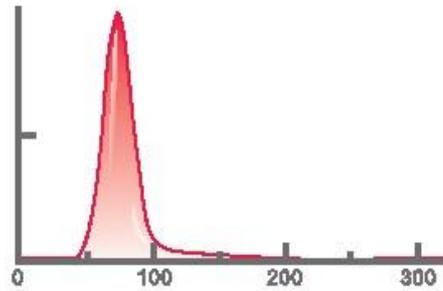
- ❑ Tri-angle laser scatter + focused flow + chemical dye, created the possibility for better 5-part WBC differentiation even on samples with high Eosinophil
- ❑ Dedicate channel and optical method for Basophil measurement , have a better performance on basophil counting than traditional impedance method.



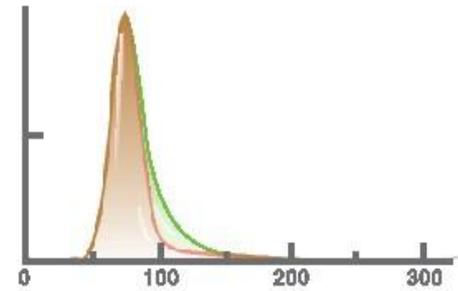
Digital sheath flow



Before Digital Sheath Flow



After Digital Sheath Flow



The comparison on histogram

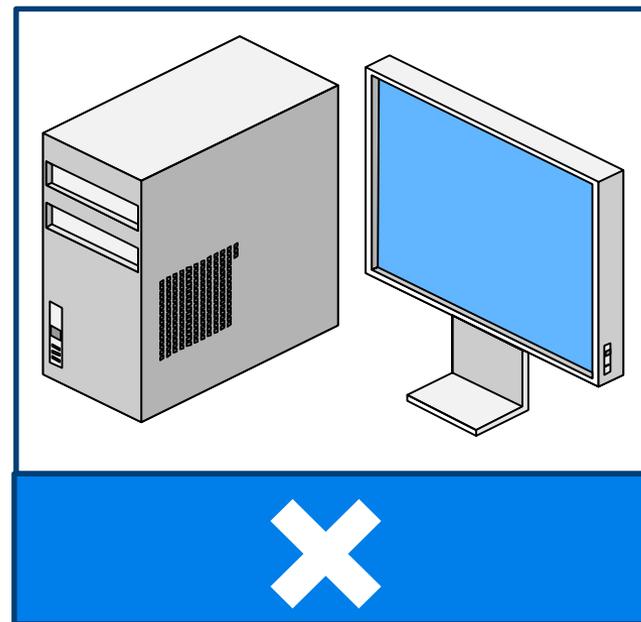
Digital Sheath Flow (DSF)

- ❑ Mindray patented technology can monitor every cell's status while going through the aperture, this accurately measures the volume of cells, giving a standardized histogram shape.
- ❑ Get more accurate RDW-CV and RDW-SD.

Efficient



Built-in touch screen operation



Reagent consumption

BC-5130

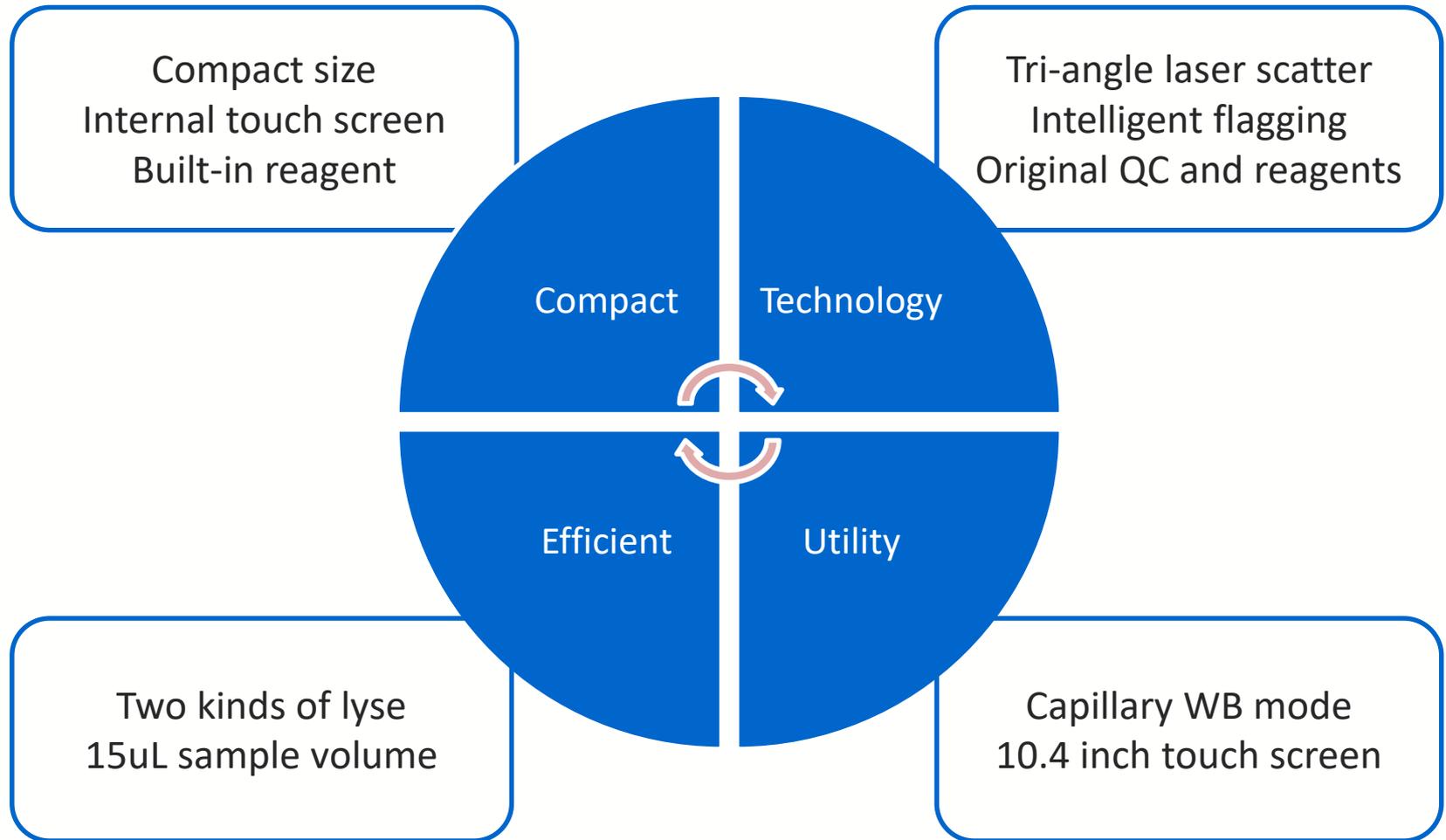
	Diluent	DIFF	LH	Probe Cleanser
<i>Start-up (ml)</i>	65	1	0.2	-
<i>CBC+DIFF (ml)</i>	28	1	0.2	-
<i>CBC (ml)</i>	24	0	0.2	-
<i>Shut-down (ml)</i>	61	1	0.2	2

BC-5300

	Diluent	LEO I	LEO II	LH	Cleanser	Probe Cleanser
<i>Start-up (ml)</i>	137	4.7	3.14	3.5	-	-
<i>CBC+DIFF (ml)</i>	45	1.7	0.14	0.5	-	-
<i>CBC (ml)</i>	32	-	-	0.5	-	-
<i>Shut-down (ml)</i>	53	-	-	-	29	3.6

□ Compared with BC-5300, BC-5130 has lower reagent consumption.

BC-5130 is a "CUTE" 5-part





Thank you!