

ABX **Pentra 60 C+** ●  
Process efficiency in Hematology



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Versatile Barcode Reader



Sample Tube Holder  
Utilizes Multiple  
Tube Sizes

## Concepts and Technology

- MDSS\*
- DHSS\*
- No compressor,  
no shear valve (no maintenance)

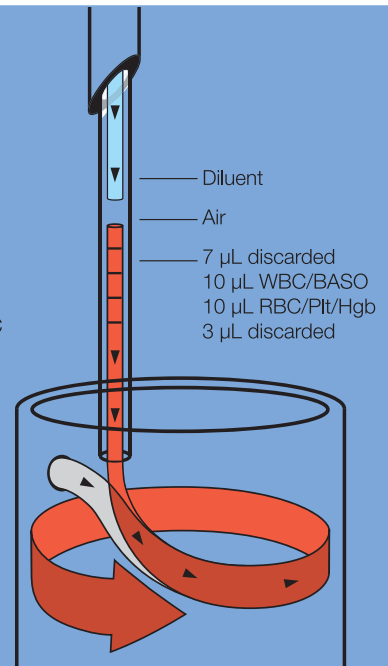
\*HORIBA Medical Patents

## MDSS Multi Distribution Sampling System\*

### MDSS Microsampling

- Sampling : only 30  $\mu$ L whole blood for CBC  
(53  $\mu$ L for CBC + DIFF).
- Sample dispensed into pre-heated analysis  
chamber for highly reproducible results.
- Tangential flow reagent dilution for optimal  
sample mixing.

\*HORIBA Medical Patents



Microsampling of 30  $\mu\text{L}$  (CBC) or 53  $\mu\text{L}$  (CBC + DIFF)  
 Exceptional results with all sample types,  
 even very small volumes (Pediatric, Oncology, etc.)

Data management on external PC  
 Stand-alone organization capability

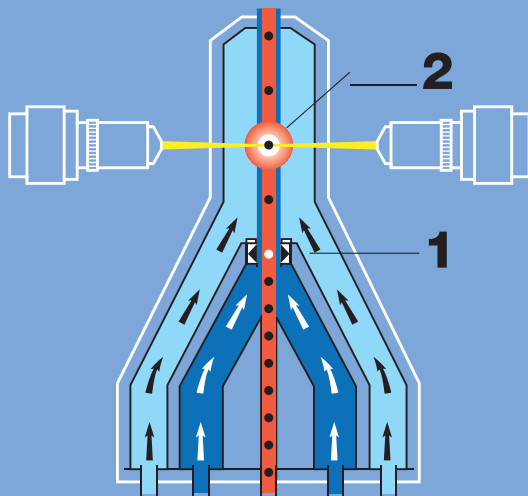
Compact 5 DIFF system  
 Small footprint

Windows XP  
 Easy to use

Closed tube sampling  
 Reduces biohazard risk

External barcode reader  
 100% accurate sample identification

## DHSS Double Hydrodynamic Sequential System\*



### Cytochemistry

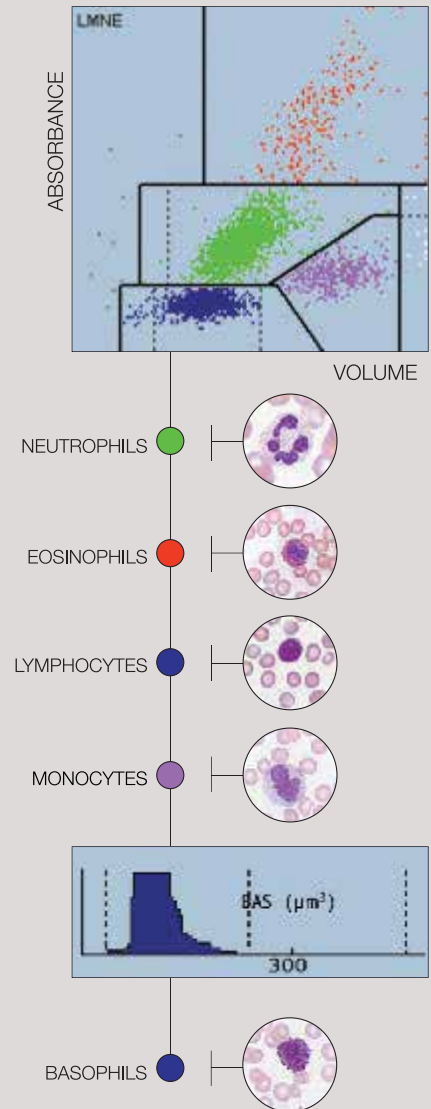
Sample incubation in a temperature-controlled chamber and enzymatic staining with Chlorazol Black. This reagent specifically stains leucocyte nuclei, granules and membranes.

### Cytometry

Injection of the prepared sample into a double hydrofocus cytometer (HORIBA Medical patent) and analysis of cell complexity with a polychromatic light source.

- 1) Measurement of actual cell volume by impedance.
- 2) Measurement of cell content by diffraction and optical absorbance.

## Results



- 20 parameters.
- Histogram of RBC, WBC, PLT.
- Color leucocyte matrix.
- Pathological and morphological alarms.
- Differential leucocyte count by DHSS technology.
- Basophil measurement through specific channel.
- Percentage and absolute value of neutrophils, lymphocytes and monocytes, eosinophils and basophils.

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## PHYSICAL SPECIFICATIONS

### • Analyzer Dimensions & Weight:

Height	Width	Depth	Weight
51.5 cm	44.5 cm	48.0 cm	35 kg
20.3 in	17.5 in	19 in	77 lbs

### • Throughput:

Up to 60 samples/hour

### • Specimen Volume:

CBC Mode	30 µL
CBC + DIFF	53 µL

### • Power Requirements:

Power supply	from 100 V to 240 V ± 10%
	50 Hz to 60 Hz
Power consumption	200 W
Maximum heat output	1440kJ/h (1365 BTU/h)

### • Reagents:

5 reagents only	Diluent
	Lysebio (cyanide free)
	Cleaner
	Eosinofix
	Basolyse II

### • Sound Pressure Level:

< 60 dBA

### • Operating Temperature & Humidity:

16 – 34°C (61 – 93°F) room temperature  
Humidity conditions: Relative humidity of 80% maximum, without condensation.

## METHODS & TECHNOLOGIES

### Multi Distribution Sampling System "MDSS"

### • RBC/PLT Detection Principles

Method	Impedance
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### • HGB Measurement

Method	Photometry
Wavelength	555 nm

### • HCT Measurement

Method	Numeric integration
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### • WBC & Baso Count

Method	Impedance
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### • Leucocyte Differentiation

Method	Impedance with hydrofocus
	Cytometry & Cytochemical

### • Calculated Parameters

MCV, MCH, MCHC, RDW

## CERTIFICATION

UL 61010-1:2012  
CAN/CSA C22.2 No. 61010-2-101-04 (R2009)

## SOFTWARE SPECIFICATIONS

### • Data Processing:

Screen: 15 in. color monitor  
Capacity: 10,000 results + graphics Windows XP  
RS 232 connection either Unidirectional or Bidirectional interface  
User defined flagging limits  
Transmits Patient & QC results to LIS using ASTM protocol

### • Quality Control Management:

12 selectable QC files  
XB: 60 operator selectable files with statistics (20 samples per file)  
Within run  
Levey-Jennings graphs

### • Logs:

Reagents, calibration, maintenance, errors, blank cycle

## PARAMETERS & PERFORMANCE DATA

### • 20 Parameters:

WBC	RBC	RDW
NE# & NE%	HGB	PLT
LY# & LY%	HCT	MPV
MO# & MO%	MCV	
EOS# & EOS%	MCH	
BAS# & BAS%	MCHC	

### • Linearity:

Parameters	Limits
WBC	0 - 120 x 10 <sup>3</sup> /mm <sup>3</sup>
RBC	0 - 8 x 10 <sup>6</sup> /mm <sup>3</sup>
HGB	0 - 24 g/dL
HCT	0 - 67%
PLT(A)*	0 - 1900 x 10 <sup>3</sup> /mm <sup>3</sup>
PLT(B)*	0 - 2800 x 10 <sup>3</sup> /mm <sup>3</sup>

### • Precision:

Parameters	%CV	Range
WBC	< 2	4 - 10 x 10 <sup>3</sup> /mm <sup>3</sup>
RBC	< 2	3.6 - 6.2 x 10 <sup>6</sup> /mm <sup>3</sup>
HGB	< 1	12 - 18 g/dL
HCT	< 2	36 - 54 %
PLT	< 5	150 - 500 x 10 <sup>3</sup> /mm <sup>3</sup>

### • Carryover:

Parameters	%	Mean Low Level	Mean High Level
WBC	< 2	1.06 x 10 <sup>3</sup> /mm <sup>3</sup>	58.81 x 10 <sup>3</sup> /mm <sup>3</sup>
RBC	< 2	1.58 x 10 <sup>6</sup> /mm <sup>3</sup>	6.37 x 10 <sup>6</sup> /mm <sup>3</sup>
HGB	< 2	5.28 x g/dL	22.03 x g/dL
PLT	< 2	31.33 x 10 <sup>3</sup> /mm <sup>3</sup>	1106.67 x 10 <sup>3</sup> /mm <sup>3</sup>

\*A Hgb ≥ 2 g/dL

\*B Hgb < 2 g/dL and PLT > 15 x 10<sup>3</sup>/mm<sup>3</sup>

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Operating IMS