

## ABX Micros ES 60

Hematology analyzer



### PHYSICAL SPECIFICATIONS

#### Dimensions & Weight:

| Height  | Width   | Depth   | Weight OT | Weight CT |
|---------|---------|---------|-----------|-----------|
| 16.9 in | 14.2 in | 14.2 in | 30.9 lbs  | 35.7 lbs  |
| 43 cm   | 36 cm   | 36 cm   | 14 kg     | 17 kg     |

#### Throughput\*:

OT: 60 samples/hour  
CT: 50 samples/hour

\* Throughput performance is reachable in optimized conditions with an admitted margin for variation of 10%.

#### Sound Pressure Level:

< 53 dBA

#### Operating Temperature & Humidity:

16 to 30°C (61 to 86°F) room temperature.

Maximum relative humidity 85% for temperature up to 30°C (86°F)

#### Specimen Volume:

CBC + 3 part DIFF 10 µL

#### Power Requirements:

Power supply from 100 V to 240 V (± 10%)  
50 Hz to 60 Hz

Power consumption 100 VA (-30%, +10%)

#### Reagents:

- ABX Minipack LMG
- ABX Minidil LMG (10L or 20L)
- ABX Minilyse LMG (1L)
- ABX Miniclean (1L)
- ABX Alphalyse 360 (0,36L)
- ABX Alphalyse (0,4 L)
- ABX Minoclair (0.5L)
- ABX Cleaner (0.5L)
- Minilysebio (0,4 and 1L)

### METHODS & TECHNOLOGIES

#### RBC/PLT Detection Principles

| Method              | Impedance            |
|---------------------|----------------------|
| Ruby diameter       | 50 µm                |
| Depression of count | 200 mb               |
| Duration of count   | 2 (or 3) x 6 seconds |
| Dilution ratio      | 1/15 000             |

#### HGB Measurement

| Method         | Photometry |
|----------------|------------|
| Wavelength     | 550 nm     |
| Dilution ratio | 1/260      |

#### HCT Measurement

| Method | Numeric integration |
|--------|---------------------|
|--------|---------------------|

#### WBC Measurement

| Method              | Impedance            |
|---------------------|----------------------|
| Ruby diameter       | 80 µm                |
| Depression of count | 200 mb               |
| Duration of count   | 2 (or 3) x 6 seconds |
| Dilution ratio      | 1/260                |

#### 3 Part Differentiation

| Method | Impedance + specific lyse action |
|--------|----------------------------------|
|--------|----------------------------------|

MCV, MCH, MCHC, RDW-CV, RDW-SD\*, PCT\*, PDW\*  
Calculation

### SOFTWARE

8.4" LCD screen  
256,000 colors, 640 x 480 pixel resolution  
Inverter card for LCD screen  
Touch screen technology  
Secure digital memory card: 512 Mo  
58mm thermal printer with rapid paper loading  
Linux Operating System

### PARAMETERS & PERFORMANCE DATA

#### 19 Parameters:

| WBC         | RBC | MCH     | PDW* |
|-------------|-----|---------|------|
| LYM# & LYM% | HGB | MCHC    | PLT  |
| MON# & MON% | HCT | RDW-SD* | MPV  |
| GRA# & GRA% | MCV | RDW-CV  | PCT* |

#### Linearity:

| Parameter             | Linearity Limit                             | Visible Range                                  |
|-----------------------|---|--|
| WBC                   | 0 - 100 x 10 <sup>9</sup> /mm <sup>3</sup>  | 100 - 150 x 10 <sup>9</sup> /mm <sup>3</sup>   |
| RBC                   | 0 - 8 x 10 <sup>6</sup> /mm <sup>3</sup>    | 8 - 18 x 10 <sup>6</sup> /mm <sup>3</sup>      |
| HGB                   | 0 - 26 g/dL                                 | 26 - 30 g/dL                                   |
| HCT                   | 0 - 80 %                                    | 80 - 90%                                       |
| PLT (Whole blood)     | 0 - 2200 x 10 <sup>9</sup> /mm <sup>3</sup> | 2200 - 6000 x 10 <sup>9</sup> /mm <sup>3</sup> |
| PLT (PLT concentrate) | 0 - 4000 x 10 <sup>9</sup> /mm <sup>3</sup> | 4000 - 6000 x 10 <sup>9</sup> /mm <sup>3</sup> |

#### Precision:

| Parameters | %CV  | Range                         |
|------------|------|-------------------------------|
| WBC        | <2.5 | 4-10.0 x 10 <sup>9</sup> /µL  |
| RBC        | <2.0 | 4-7 x 10 <sup>6</sup> /µL     |
| HGB        | <1.5 | 12-18 g/dl                    |
| HCT        | <2.0 | 36-54%                        |
| PLT        | <5.0 | 200-500 x 10 <sup>9</sup> /µL |

#### Carry-over:

|     |     |
|-----|-----|
| WBC | <2% |
| RBC | <2% |
| HGB | <2% |
| HCT | <2% |
| PLT | <2% |

\* RUO parameters (Research Use Only)

### CERTIFICATION

EN 61326-1:2006  
EN 61326-2-6: 2006  
IEC 61010-1: 2010  
IEC 61010-2-081: 2001 + A1  
IEC 61010-2-101: 2002  
UL 61010-1: 2012  
CAN/CSA - C22.2 N.61010-1-12  
CAN/CSA - C22.2 N.61010-2-081-04  
CAN/CSA - C22.2 N.61010-2-101-04  
IVD: 98/79/EC

# ABX Micros ES 60

Process efficiency in Hematology



Subject to modifications / Ref. SAP: 1300034557 / © 2017 HORIBA Medical - HORIBA ABX SAS - France - RCS Montpellier 328 031 042 (02/2017)

# ABX Micros ES 60

## The Gold Standard

A generation of hematology analyzer based on the Micros concept, universally recognized for its reliability, robustness and high quality results

## More Powerful, More Intuitive, More Secured, More Connectivity...

The perfect combination of intuitive use and innovative technologies



Closed tube version  
(Compatible with some open tubes)

- 60 samples per hour (OT Version)
- CBC + 3 DIFF (19 parameters)
- Large color touch screen
- Comprehensive quality control program
- New cyanide free lyse reagent

- User friendly interface with rapid access to all menus and virtual keyboard
- User profile management with different access levels
- Flexible data exchange for patient results and quality control
- Multi-connection capability (network and peripherals)

### Easy interpretation

- Control all the parameters from the main screen
- Access to detailed results (normal ranges and curves)
- 1000 patients results capacity
- Unlimited patient report archiving (external viewer)
- Customized reporting format



### Comprehensive quality control program

- 3 simultaneous activated blood control levels
- Levey-Jennings graphics
- XB management
- Import the 3 QC levels data in one time
- Overlapping QC capabilities (2 active lots)



### Automatic system monitoring

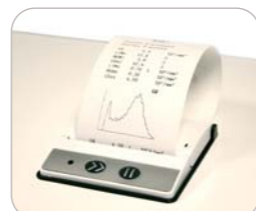
- Real-time instrument status with help messages
- Automatic reagent test count down
- Automatic daily maintenance and operational alerts
- Complete traceability in compliance with accreditation standards (users, reagents, controls, maintenance...)



### Integrated barcode reader\*

- . Secured identification (patient, QC and reagent lot numbers)
- . Compatible with ISBT128 barcodes

\*Available in closed tube version  
(optional external barcode reader for open tube version)



### Integrated ticket printer

- . Full data print-out
- . PLT, RBC, and WBC curves

(optional external printer in closed tube and open tube versions)



### USB connection

- . Archiving patients and QC results
- . Downloading QC target values



### Unique pack system

- . Innovative ABX patent
- . Ready to use
- . Optimized packaging
- . Simplify your lab organisation

(optional bottle version)

## ABX Micros Concept "Zero maintenance" system

- **Micro-sampling**  
Only 10µl of whole blood per analysis
- **Liquid valves**  
Precise volume and reliability
- **Stepper motor vacuum pump**  
Noiseless running (no-compressor)

## Full Connectivity Integrated Technologies

- **Software**  
Java™, Linux Operating System, HTML
- **Hardware: 6 connections ports**  
RS232 (2), USB (3), RJ45 (1)
- **ABX, ASTM and HL7 protocols available**

