

HumaCount 5D

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System Overview

REF	16450
Analyzer type	Automatic hematology analyzer
Reagent system	Closed by RF card
# of Parameters	29, 5-part differential of WBC
Throughput	Up to 60 samples / hour
Barcode reader	Optional barcode reader via USB
Reaction / reading system	Impedance method LED 525-535 nm for HGB measurement 3D Laser scatter technology for differentiation
Languages available	English further languages can be installed soon (Spanish etc.).
User interface	10.4 inch TFT Touch Screen

HumaCount 5D

Automatic hematology system

Tests	Parameters	CBC + Diff mode (29 parameters) RBC, MCV, HCT, RDW-SD, RDW-CV, HGB, MCH, MCHC, PLT, MPV, PCT, PDW, P-LCC, P-LCR WBC, LYM#, LYM%, MON#, MON%, NEU#, NEU%, EOS#, EOS%, BAS#, BAS%, (ALY#, ALY%, LIC#, LIC%)* Distribution histograms: WBC, RBC, PLT 3 Dot-Plots (DIFF): LS-MS, LS-HS, HS-MS, 1 Dot Plot (BASO) LS-MS 3 histograms for WBC, RBC and PLT CBC mode (15 Parameters) WBC,RBC, HGB, MCV, MCH, MCHC, RDW-cv, RDW-sd, HCT, PLT, MPV, PDW, PCT, P-LCC, P-LCR
	Calibration	Manual mode and SW supported automatic mode, for whole blood & capillary, pre-diluted blood (at least of the following parameters (RBC;WBC, PLT, MCV, MPV, HCT)
	Self check	Yes
	Flags/Messages	Clinical (pathological) flags
		Lab limits (normal ranges) high/low value Technical information: high blank, measurement noise

Sample	Sample type	Human venous or capillary whole blood (K2 and K3-EDTA anticoagulant) Capillary blood collected by HUMAN capillary tube
	Sample vessels	Any open tube type
	Sampling volume	20 µl whole blood / capillary blood / prediluted blood , 11 µl in CBC mode
	Dilution	Yes, internal

Reagent	Reagent type	Diluent, CBC-lyse, Diff-lyse (all reagents Cyanid free)
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Liquid Handling	Liquid transportation	Dilutor pumps, vacuum
	Liquid level sensors	Yes, for each reagent and for waste

Reading	Light source	Green LED with 540 nm wavelength
	Wavelengths pre-installed	540 nm
	Detector	Photodiode
	Aperture diameter	70 µm RBC / PLT

*Research use only

Data Processing

Memory for	QC, records including flags, scatter- and histograms
Memory capacity	50.000
Reports for	Result, QC, self check, calibration
Quality control module	Levey-Jennings charts, XB-charts
Max. number of control levels	6
Warnings	Range, linearity, errors
Printer	Via USB port, special list of printers
PC	Built-in
LIS	LIS bi-directional, HL7 standard
USB ports	4 x USB 2.0
Barcode reader	Via USB

General

Physical dimensions (W x D x H)	Packaging: 550 x 600 x 660 mm Installed: 360 x 420 x 485 mm
Weight	Gross: instrument 33 kg Net: instrument 28 kg
Main fuse	6.3 AH 250V
Electrical requirements	Power supply input: 100...240 VAC, 47...63 Hz Power consumption: 200 VA max.
Environmental	Operating: temperature: 10...30°C, relative humidity: 20...85 % non-condensing Storage: temperature: 5...40°C, relative humidity: 20...85 % non-condensing Operation atmospheric pressure: 70...106kPa
Wash / waste tank	Waste Container 20 L

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Scope of Supply

	Unit/Size	REF
HumaCount 5D	1	16450
Packlist		
Power Cable	1	18999
UPS 0.8 KVA / 230V	1	18961
Power Safety Socket	1	18969
Adapter EU to USA	1	18967
Adapter EU to UK	1	18968
User Manual	1	16450/1
Quick Guide HumaCount 5D	1	16450/5-2
Quick Guide Capillary Blood Mode	1	16450/5-1
Reagent Operation Guide	1	16450/5-3
Waste Container 20 L + Box	1

Obligatory Items

System Reagents	REF
HC5D Diluent (20 L)	16450/10
HC5D CBC Lyse (200 ml)	16450/20
HC5D DIFF Lyse (500 ml)	16450/30
HC5D-Clean (50 ml)	16450/60



Calibrator (Strongly recommended)	REF
HC-Calibrator (1x2 ml)	17400/50

As with all other blood calibrator products on the market, the hematology calibrators have a limited shelf life. As a result, calibrators are available only on the basis of a standing order in accordance with a fixed delivery schedule. Calibrator are delivered as separate shipment under cooling conditions.



Controls (Strongly recommended)	REF
HC5D-Control (2 x3 x 3 ml)	16450/40

As with all other blood control products on the market, the hematology controls have a limited shelf life. As a result, controls are available only on the basis of a standing order in accordance with a fixed delivery schedule. Controls are delivered as separate shipment under cooling conditions.

Warranty (Strongly recommended)	REF
Warranty Extension kit	16450/500

Optional Items

Accessories

2D Barcode Scanner

Laser Printer

REF

16430/11

18993L

Consumables

Capillary tubes, 20 μ l (100pcs)

HumaTube K3-EDTA PET, 3ml (12x100 tubes)

HumaTube K3-EDTA PET, 7ml (12x100 tubes)

HumaTube K2-EDTA PET, 3ml (12x100 tubes)

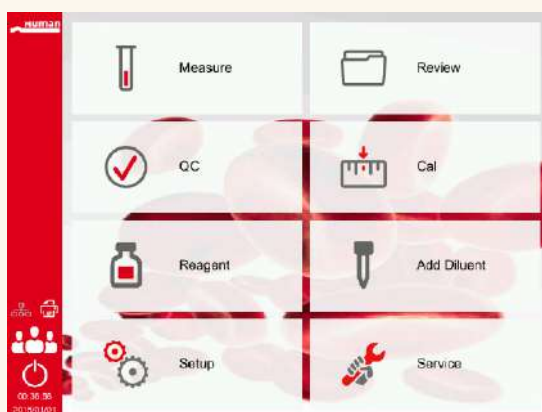
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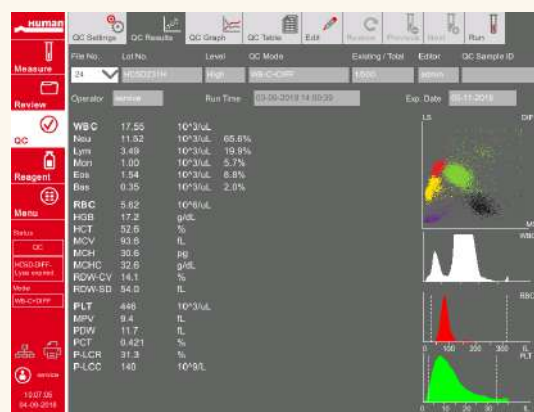
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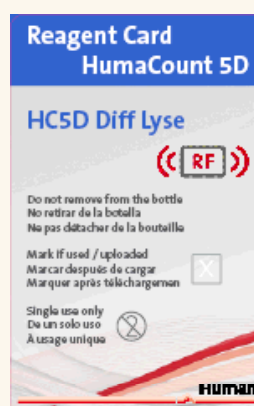
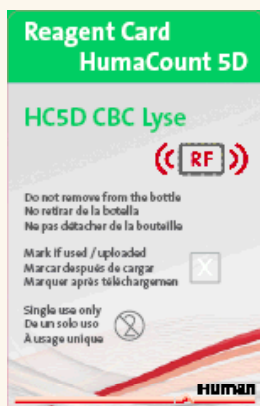
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HumaCount 5D Main Screen Menu



HumaCount 5D Measurement Screen



HumaCount 5D Reagent Smart Cards

Characteristics

Specification on Repeatability

Parameter	Whole Blood Repeatability	Pre-dilution Repeatability
WBC	$\leq 2.0\%$ ($4.0-15.0 \times 10^9/L$)	$\leq 4.0\%$ ($4.0-15.0 \times 10^9/L$)
Neu%	± 4.0 (absolute deviation) (50.0% - 60.0%)	± 8.0 (absolute deviation) (50.0% ~ 60.0%)
Lym%	± 3.0 (absolute deviation) (25.0% - 35.0%)	± 6.0 (absolute deviation) (25.0% ~ 35.0%)
Mon%	± 2.0 (absolute deviation) (5.0% - 10.0%)	± 4.0 (absolute deviation) (5.0% ~ 10.0%)
Eos%	± 1.5 (absolute deviation) (2.0% - 5.0%)	± 2.5 (absolute deviation) (2.0% ~ 5.0%)
Bas%	± 0.8 (absolute deviation) (0.5% - 1.5%)	± 1.2 (absolute deviation) (0.5% ~ 1.5%)
RBC	$\leq 1.5\%$ ($3.5 - 6.0 \times 10^{12}/L$)	$\leq 2.0\%$ ($3.5-6.0 \times 10^{12}/L$)
HGB	$\leq 1.5\%$ (110-180g/L)	$\leq 2.0\%$ (110-180g/L)
PLT	$\leq 4.0\%$ ($150-500 \times 10^9/L$), $\leq 6.0\%$ ($100-149 \times 10^9/L$)	$\leq 8.0\%$ ($100-500 \times 10^9/L$)
MCV	$\leq 1.0\%$ (70-120 fL)	$\leq 1.5\%$ (70-120 fL)
MPV	$\leq 4.0\%$	$\leq 8.0\%$

Specification of Linearity Range and Carry Over

Parameter	Linearity Range	Linearity Error	Carry Over
WBC	(0.00 - 100.00) $\times 10^9/L$ (100.01 - 500.00) $\times 10^9/L$	No more than $\pm 0.30 \times 10^9/L$ or $\pm 5\%$ No more than $\pm 10\%$	CV $\leq 0.5\%$
RBC	(0.00 - 8.50) $\times 10^{12}/L$	No more than $\pm 0.05 \times 10^{12}/L$ or $\pm 5\%$	CV $\leq 0.5\%$
HGB	(0 - 250)g/L	No more than ± 2 g/L or $\pm 2\%$	CV $\leq 0.5\%$
PLT	(0 - 1000) $\times 10^9/L$, RBC ≤ 7.0 (1001 - 3000) $\times 10^9/L$, RBC ≤ 7.0	No more than $\pm 10 \times 10^9/L$ or $\pm 8\%$ No more than $\pm 12\%$	CV $\leq 0.5\%$
HCT	0 - 67%	No more than $\pm 2\%$ (HCT value) or $\pm 3\%$ (percentage error)"	CV $\leq 0.5\%$

Parameter (y=ax+b)	WBC	RBC	HGB	MCV	PLT
Correlation (r \geq)	0.99	0.99	0.98	0.98	0.95

Legal statement

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