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, Spanish, French, Russian
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)
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
Data Cable	1	.....
Peripheral Grounding Cable	1	.....
Waste Float Adapter Tube	1	.....
Diluent Adapter Tube	1	.....
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 seperate shipment under cooling conditions.

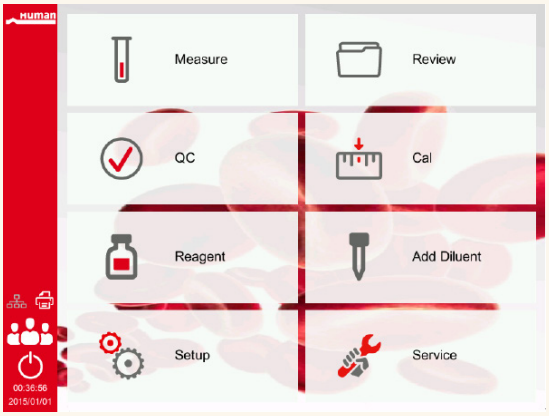
Service Kit (Strongly recommended)

	REF
Starter Spare Part Kit for HumaCount 5D (sufficient for up to 5 instruments)	16450/501

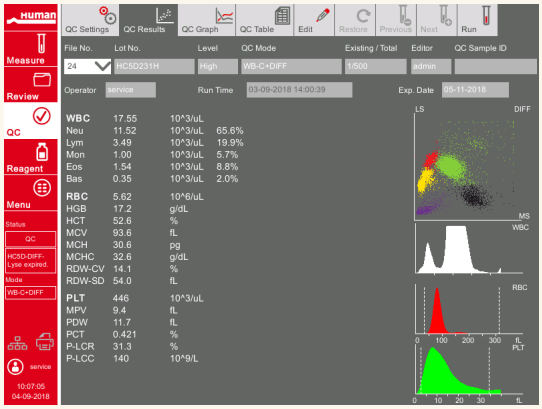
Optional Items

Accessories	REF
2D Barcode Scanner	16430/11
Laser Printer	18993L

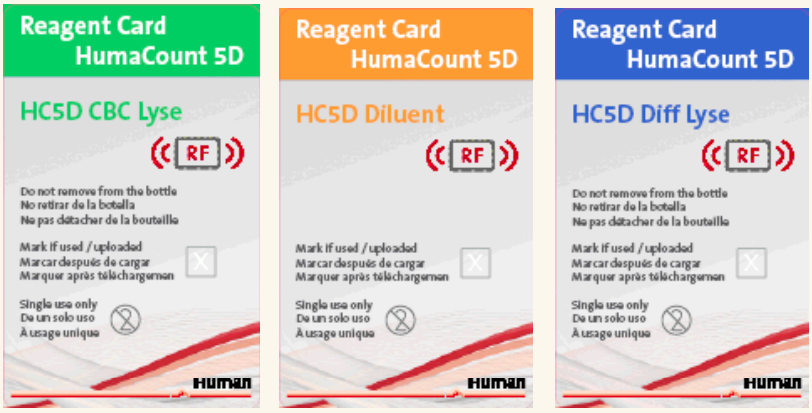
Consumables	REF
Capillary tubes, 20µl (100pcs)	16070/30
HumaTube K3-EDTA PET, 3ml (12x100 tubes)	73040/12
HumaTube K3-EDTA PET, 7ml (12x100 tubes)	73045/12
HumaTube K2-EDTA PET, 3ml (12x100 tubes)	73032/12



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	≤2.0% (4.0-15.0 × 10^9/L)	≤4.0% (4.0-15.0×10^9/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	≤1.5% (3.5 - 6.0×10^{12}/L)	≤2.0% (3.5-6.0$10^{12}$/L)
HGB	≤1.5% (110-180g/L)	≤2.0% (110-180g/L)
PLT	≤4.0% (150-500×10^9/L), ≤6.0% (100-149×10^9/L)	≤8.0% (100-500×10^9/L)
MCV	≤1.0% (70-120 fL)	≤1.5% (70-120 fL)
MPV	≤4.0%	≤8.0%

Specification of Linearity Range and Carry Over

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

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