

# Reagents & Quality Control

Substrates			REF
Albumin Iquicolor	4 x 100 ml	1,000 ml	156004 10560
auto- Bilirubin -D Iquicolor	375 ml		10741
auto- Bilirubin -T Iquicolor	375 ml		10742
Bilirubin Iquicolor	200 ml		10012
Bilirubin Direct/Total Iquicolor	2 x 100 ml		10740
Cholesterol Iquicolor	4 x 30 ml	4 x 100 ml	10017 10028
auto- Creatinine Iquicolor	250 ml		10052
Creatinine Iquicolor	200 ml		10051
Creatinine (enzym.) Iquicolor	2 x 40 ml		10053
Glucose Iquicolor	4 x 100 ml	1,000 ml	10260 10121
Glucose IquiuV <sup>mono</sup>	1,000 ml		10786
Glycohemoglobin HbA <sub>1c</sub>	20 tests		10657
HbA <sub>1c</sub> Iquidirect	40 ml		10770
Control Blood (normal/abnormal) Calibrator Set	4 x 0.5 ml	4 x 0.5 ml	10775 10776
HDL Cholesterol Iquicolor	80 ml		10084
HDL Cholesterol	4 x 80 ml		10018
Hemoglobin Iquicolor	10 x 500 ml		10751
Homocysteine IquiuV	1 x 34 ml		11140
Iron Iquicolor	2 x 30 ml		10229
Iron TPTZ Iquicolor	2 x 100 ml		12291
LDL Cholesterol Iquicolor	80 ml		10094
TIBC	100 tests		10670
Total Protein Iquicolor	4 x 100 ml	1,000 ml	157004 10570
Triglycerides Iquicolor <sup>mono</sup>	9 x 15 ml	4 x 100 ml	10720P 10724
Urea Iquicolor	Complete kit	2 x 100 ml	10505
	Reagent 1	1,000 ml	10506
	Reagent 2	1,000 ml	10507
Urea IquiuV	8 x 50 ml		10521
Uric Acid Iquicolor <sup>Plus</sup>	3 x 100 ml		10694
Uric Acid Iquicolor	4 x 30 ml	4 x 100 ml	10690 10691
<b>Lipoproteins</b>			
Apolipoprotein A1 (APO A1)	2 x 30 ml		11101
Apolipoprotein B (APO B)	2 x 30 ml		11102
Lipoprotein (a), Lp(a)	2 x 25 ml		11105
Microalbumin	2 x 25 ml		11120
<b>Inflammatory and Rheumatoid Tests</b>			
anti -Streptolysin-O (ASO)	2 x 50 ml		11251P
CRP-hs	3 x 115 ml		11541
CRP	1 x 10 ml		11241
Rheumatoid Factors (RF)	2 x 50 ml		11261P



Enzymes			REF
Acid Phosphatase	16 x 2 ml		12660
Prostatic Acid Phosphatase	6 x 15 ml		10660
Alkaline Phosphatase Iquicolor	10 x 10 ml		12117
Alkaline Phosphatase opt. Iquicolor	10 x 10 ml	8 x 50 ml	12017 12027
alpha- Amylase Iquicolor	12 x 10 ml	8 x 50 ml	12018 12028
CK-MB IquiuV	10 x 10 ml		12118
CK-MB (NAC-activated)	20 x 3 ml		12008
CK NAC activated IquiuV	10 x 10 ml		12015
CK NAC activated	20 x 3 ml		12005
gamma-GT Iquicolor	10 x 10 ml	8 x 50 ml	12013 12023
GOT (ASAT) IFCC mod. IquiuV	10 x 10 ml	8 x 50 ml	12011 12021
GPT (ALAT) IFCC mod. IquiuV	10 x 10 ml	8 x 50 ml	12012 12022
Lipase Iquicolor	50 ml	6 x 20 ml	12006 12026
LDH SCE mod. IquiuV	16 x 5 ml	10 x 10 ml	12214 12014 12024
Pancreas-Amylase Iquicolor	4 x 10 ml	6 x 20 ml	12009 12029
<b>Electrolytes</b>			
Calcium Iquicolor	200 ml		10011
Chloride Iquicolor	2 x 100 ml		10115
Magnesium Iquicolor	200 ml		10010
Phosphorus Iquirapid	200 ml		10027
Potassium Iquirapid	100 ml		10118
Potassium IquiuV	40 ml		10120
Sodium Rapid	60 ml		573351
Sodium Iquicolor	40 ml		10113
<b>Immunoturbidimetry Products</b>			
<b>Plasmaproteins</b>			
Complement C3	2 x 20 ml		11110
Complement C4	2 x 20 ml		11113
Cystatin-C Iquidirect	1 x 40 ml		11150
Transferrin	2 x 30 ml		11115
Ferritin Latex	1 x 25 ml		11610
Immunoglobulins direct	IgG	2 x 10 ml	11502
	IgA	2 x 10 ml	11501
	IgM	2 x 10 ml	11503
<b>Quality Control &amp; Calibrator</b>			
Serodos* / Serodos* <sup>plus</sup>			13951/13151
Control sera from human donors			
Autocal			13160

# HumaStar 200

Random-Access Automated Bench top Analyzer



German Quality & Reliability

## Features:

- ✓ Less than 1.6ℓ/h water consumption
- ✓ 8-step wash station
- ✓ Reagent cooling
- ✓ 30 reagent and 60 sample positions
- ✓ Internal sample barcode reader
- ✓ Capacitive liquid level detector
- ✓ Needle shock detector
- ✓ Large liquid containers with level sensors
- ✓ Automatic pre- and post-dilution
- ✓ Programmable automatic start up routine
- ✓ Removable sample tray
- ✓ Removable reagent tray
- ✓ Continuous loading of samples
- ✓ Extensive QC monitor
- ✓ Multiple work lists

Imported & Marketed By:

**STEDMAN**  
 No. 14 A, 3rd Cross Street, Nehru Nagar, Kottivakkam, Chennai - 600 041  
 Customer Care : +91 9840707999  
 Email : [diagnostics@stedmanpharma.com](mailto:diagnostics@stedmanpharma.com)  
 Website : [www.stedmandiagnostics.com](http://www.stedmandiagnostics.com)

**Human**  
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# HumaStar 200



## System Overview

Cat. No.	16895
Analyzer type	Automatic analyzer
Reagent system	Open (Human pre-installed)
Throughput (max. and typical)	200 tests/hr maximum 120-130 tests/hr typical (applies to most parameters)
Operation modes	Random-access with STAT
Barcode reader	Internal sample barcode reader
ISE	None
Reaction / reading System	Reaction cuvettes with multicycle washing station
Languages available	English, French, Spanish
User interface	External PC, touch screen recommended

## Tests

Measuring modes	Routine chemistry, turbidimetry
Analysis modes	Endpoint (bichromatic) with self blank Differential endpoint with self blank Fixed time Kinetic (bichromatic)
Calculation modes	Factor Multi standard Single standard
Calculation algorithms	Linear (factor, linear, linear regression, average) Non linear (cubic spline, poly-linear, logit-log four parameters)
# of programmable tests	50 active methods on instrument
# of programmable profiles	Unlimited
# of standards per test	Up to 8

## Sample / Control / Calibrator

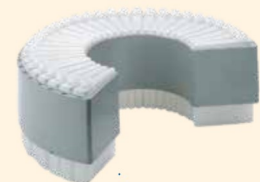
Sample type	Serum, plasma, urine, CSF
Sample vessels	Primary tubes (12.5 x 100 mm), optional tray (16 x 100 mm) Sample cups (10 mm), optional tray (Hitachi 3.5 ml)
Sample positions	Total of 60 positions for samples, optional tray 20 + 20 positions
Sampling volume	2 to 300 µl/test
Loading	Continuous
Pre-Dilution	Automatic (In-needle or reaction cuvette)
Post-Dilution	Automatic (abnormal levels, excessive substrate consumption and/or lack of linearity)

## Reagent

Reagent positions	30 reagent positions (20 ml, 50 ml, adapter for tubes and cups, removable tray)
Reagent cooling	Approx. 9 °C below room temp. at bottom of reagent, independent switch
Reagent 1-2 volume range	5 to 350 µl

## Reaction unit

Reaction wells / positions for incubation	80 washable Bionex® cuvettes
Reaction volume (minimum)	210 µl
Reaction volume (maximum)	350 µl
Cuvette washing system	8-step wash station, 8 needles 2 bottles: systemic- and special wash solution
Incubation temperature	37°C ± 0.2°C heat transfer by air
Incubation time	792 sec. max. incubation + reading time



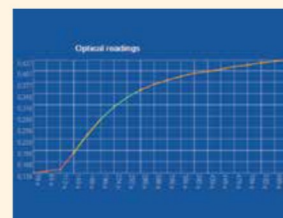
Reagent Bottles Tray (30 pos.)



Sample Tray (60 pos.)



User Interface: Reagents



Absorbance Chart



User Interface: Samples

## Liquid Handling

Liquid transportation	Pipetting arm
Liquid level sensors	Capacitive
Collusion detection for probe	Yes (vertical)

## Reading

Optical system	Interference filters
Readings	Mono- or bichromatic
Light source	Halogen lamp
Spectral range	340 to 900 nm
Wavelengths pre-installed	340, 405, 505, 546, 578, 600, 650, 700 nm
Max. # of wavelengths installed	9
Wavelength error (accuracy)	± 2 nm on peak wavelength
Wavelength bandwidth (precision)	Half bandwidth 10 mm
Detector	Silicon photodiode
Absorbance range (linearity)	0 to 2.5 OD
Resolution	0.0001 OD

## Data Processing

Memory for	Sample results, calibration, patient data, QC data, error-log, absorbance curves
Memory capacity	Unlimited (HDD)
Reports for	Patient, single test, complete sample, work sheet, method and QC's, calibration curves, kinetics, continuous printing
Quality control module	Levey-Jennings, Westgard multirules, SD, CV%
Max. number of control levels	Up to 3 levels per test
Test statistics	Number executed, SD, CV%, Mean
Warnings	Analytical limits, reagent and reaction integrity check (blank, linearity, substrate depletion, reaction OD etc.),
Printer	Printer connected to external PC
LIS	ASTM Bi-directional, ethernet of external PC, polling mode on LAN

## General

PC min. requirements	External PC, Pentium IV 2GHz, CD-ROM, Memory: 512 Mbytes RAM, Hard disk capacity > 20 GBytes, USB 2.0 ports (min. 3, excl. mouse and keyboard) Operating system: Windows 7 or XP (SP3), latest updates installed, .Net 4.0 Ethernet network adaptor, min. 900 dots vertical resolution Recommended: 17 inch touch screen, 1280 x 1024 resolution
Physical dimensions (W x D x H)	Instrument without any components: 69 x 76 x 52 cm Space required for routine use: 150 x 90 x 100 cm Packaging: 92 x 86 x 79 cm + 58 x 38 x 58 cm Weight: Gross: 90.0 kg, net: 51.0 kg
Mains fuse	T2 A / 250V, 5 x 20 mm
Electrical requirements	110...120, 220...240 VAC; 50/60 Hz; < 200 VA
Operating environment	Temperature 16...30 °C, Humidity < 80 % rel. non condensing
Wash / waste tank	20 l systemic, 2 l special wash, 20 l waste, level sensors, water quality min. de-ionized < 10 µs