

Technical Specifications

Throughput	200 Tests / hour
ISE (Optional)	300 test / hour
System Functions	
Analysis method	End Point, Fixed Time (2-point), Kinetic Rate-A, Kinetic Rate-B, Sample/ Reagent blanking, ISE
Assay modes	Colorimetry, Turbidimetry, Single and Double reagent, Multi Standard, Mono and Bi - Chromatic
Sample Types	Serum, Plasma, Urine, CSF
Sample / Reagent processing	
Sample position	45
Sample volume	2 - 50 μ l (Adjustable in 0.1 μ l step)
Sample dilution	2 to 40 times
Reagent position	45 for R1 and R2
Reagent volume	Reagent 1: 180-350 μ l (Adjustable in 1 μ l step) Reagent 2: 0 or 10-350 μ l (Adjustable in 1 μ l step)
Mixing	Mixing by paddle or by aspirate-dispense of reaction volume
Reaction System	
Reaction cuvette	60 (Permanent Hardglass Cuvettes)
Cuvette washing	On board laundry with 7 step washing system
Water consumption	6 litres / hour
Optical length of cuvette	6.5 mm
Reaction volume	180 - 550 μ l
Reaction time	For one Reagent chemistry incubation time is & 30-600sec and for 2 Reagent Chemistry it is 30-300sec for each reagent
Reaction temperature	37°C \pm 0.2° C
Optical System	
Measurement principle	Photometry
Light source	Tungsten halogen lamp (12V 20 W) cooled with air option for auto on/ off of lamp
Wavelength	Total 9 filters (340, 405, 450, 510, 546, 578, 620, 670, 700 nm)
Detector	Silicon photodiode
Absorbance range	0 - 3.0 Abs
Resolution	0.0001 Abs
Calibration	
Calibration points	K-Factor, Linear (one, two and multi point), Logit-log, Spline, Exponential, Polynomial (second, third and fourth order)
Auto re-run	Multipoint curves for up to 6 points execution by repeat run list or auto execution Auto execution according to abnormal marking or range over
Data Storage	
Test results:	Unlimited tests
Reaction curve:	Unlimited tests
Profiles:	20 per sample type
	Within day as well as day-to-day X and X-R control diagram (L-J Graph)
Quality Control	
	Real time quality control based on Multi-rule method mean, SD, %CV, R is calculated for all parameters for sample replicates. Daily and monthly batch QC with data archiving.
Working Conditions	
Power supply	110/220 VAC, 50/60 Hz (Max. Power 250 W)
Temperature	10° C - 30° C
Humidity	40% - 80% free from water dew formation
Operation System	
Input and Output	Windows XP, Windows 7, Windows 8, Windows 10 or Winfix
Input	RS 232 interface/computer
Output	Multiformat printout
Dimensions	
	736mm (L) x 553mm (W) x 432mm (H)
Weight	
	Approx. 55 kgs

Meril Academy



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Meril Diagnostics endeavor to manufacture most of the products in-house witnesses the launch of AutoQuant 200 Excelus® bench top fully automated random access chemistry analyzer with a throughput of 200 tests per hour, its unique compact model with inbuilt laundry and cooling facility for Reagents makes it ideal for a medium size laboratory for routine tests and as backup for bigger laboratories. It's unique software, feature of user defined reflex action and many other features makes it user friendly Fully Auto Analyzer.

Reagent & Sample Tray

- 45 refrigerated reagent positions & 45 sampling positions concentrically arranged
- Reagent & Sample positions are bar code enabled
- Detachable Reagent Tray
- Peltier based cooling system to maintain temperature between 8°C to 12° C
- 20 ml Reagent bottles
- Primary tubes & samples cups can be used
- Continuous loading
- STAT/controls/calibrators can be placed at any position



Figure. 1

Sample probe, Reagent probe & Stirrer

- Hydrophobic probes which prevents cross contamination
- Internal & external prob washing
- Probe carry over < 3%
- Capacitive level detection
- Vertical and horizontal obstruction detection facility to prevent probe crash
- Long life pipetting system with plunger driven by precised stepper motor
- Electropolished stirrer



Figure. 2

Reaction & Optical System Unit

- 60 Permanent Hard Glass cuvettes
- Cuvette material which ensures high transmittance
- 7-step on board washing, carry over < 1%
- Continuous cuvette blank checking, if blank exceeds the limit, cuvette is skipped

Software

- User friendly software
- Online curve for all types of chemistries
- User defined reflex action ensures time management
- Pre-dilution & Auto-dilution facility
- Real Time online monitoring for running status of
 - Sample tray
 - Reagent tray
 - Reaction cuvette
 - Reagent Inventory

Cooling System for Peltier

- Water based cooling system for peltier
- Prolongs the life of peltier
- Ensures high onboard stability of Reagents
- Reduces the internal heat dissipation of instrument

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- Accuracy:**
 On board cooling and On board laundry system
 Option of three different wash for forbidden pairs to minimize the carry over
- High Precision:**
 Meril cutting edge technology for volume measurement by ceramic block piston
- Convenience:**
 Intuitive software of reflex testing and dedicated system packs
- Flexibility:**
 Processing of emergency samples can be dealt on priority with STAT function
- Ease of operation:**
 Windows based software, compact design

AutoQuant System Reagents

Mat Code	Material Description	Pack Size
ALBAQ1-01	ALBUMIN	6 x 20 ml
AMYAQ1-01	AMYLASE	4 x 20 ml
ALPAQ1-01	ALKALINE PHOSPHATASE	4 x 15 ml
GPTAQ1-01	ALAT (GPT)	6 x 20 / 6 x 5 ml
GOTAQ1-01	ASAT(GOT)	6 x 20 / 6 x 5 ml
BITAQ1-01	BILIRUBIN TOTAL	5 x 15 / 5 x 5 ml
BIDAQ1-01	BILIRUBIN DIRECT	5 x 15 / 5 x 5 ml
CAAAQ1-01	CALCIUM (A)	4 x 20 ml
CREAQ1-02	CREATININE	5 x 15 / 5 x 15 ml
CKNAQ1-01	CREATINE KINASE NAC	2 x 20 / 2 x 5 ml
CKMAQ1-01	CREATINE KINASE MB	2 x 20 / 2 x 5 ml
CHOAQ1-01	CHOLESTEROL	6 x 20 ml
HDLAQ1-01	HDL CHOLESTEROL (Direct)	2 x 18 / 2 x 6 ml
LDLAQ1-01	LDL CHOLESTEROL (Direct)	1 x 18 / 1 x 6 ml
CHDAQ1-01	CHLORIDE	4 x 20 ml
GGTAQ1-01	g-GLUTAMYL TRANSFERASE	1 x 20 / 1 x 5 ml
GLUAQ1-01	GLUCOSE	10 x 20 ml
LDHAQ1-01	LACTATEDEHYDROGENASE	1 x 20 / 1 x 5 ml
MAGAQ1-01	MAGNESIUM	4 x 20 ml
PHOAQ1-01	PHOSPHORUS	4 x 20 ml
TPRAQ1-01	TOTAL PROTEIN	6 x 15 ml
MTPAQ1-01	MICROPROTEIN	4 x 20 ml
TRGAQ1-01	TRIGLYCERIDE	6 x 20 ml
URCAQ1-01	URIC ACID	4 x 15 ml
UREAQ1-01	UREA	6 x 20 / 6 x 5 ml
MALAQ2-01	MICRO ALBUMIN	2 x 20 /2 x 5ml
CRPAQ2-01	CRP	2 x 20 /2 x 5ml
LIPAQ2-01	LIPASE	1 x 20 / 1 x 12 ml
HBAAQ2-01	HbA1c	2x15/2x5.5/1x75/4x0.5 ml

Controls & Calibrators:

CRNCNC-01	BioNorm	1 x 5 ml
CRPCNC-01	BioPath	1 x 5 ml
CALCNC-01	Bio Cal	4 x 3 ml