

Excelus Works, You relax...

AutoQuant 200 Excelus



Meril Diagnostics endeavor to manufacture most of the products in-house witnesses the launch of AutoQuant 200 Excelus[™] bench top fully automated 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 a backup for bigger laboratories. Its unique software, feature of user defined reflex action and many other features makes it user friendly Fully Auto Analyzer.

Reagent & Sample Tray

- 30 refrigerated reagent positions & 30 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
- Single Teflon coated stirrer



Figure. 2

Reaction & Optical System Unit

- 60 discrete, dismountable, easily replaceable and reusable cuvettes with 6 mm optical path
- Cuvette material which ensures high transmittance
- 7-step on board washing
- Hot Water wash of cuvettes, 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

Technical Specifications

Throughput Double Reagent : Max 200 Tests / hour

Single Reagent: Max 240 Tests / hour

ISE Optional

System Functions

Analysis method End Point, Fixed Time (2-point), Kinetic Rate-A, Kinetic Rate-B

Assay modes Colorimetry, Turbidimetry, Single and Double reagent, Multi standard, Mono and Bi – Chromatic

Sample / Reagent proccesing

Sample position 30

Sample volume $2 - 50 \,\mu$ l 0.1 μ l step Sample dilution 2 to 40 times Reagent position 30 for R1 and R2

Reagent volume Reagent 1: $180-350 \mu l$ (Adjustable in $1 \mu l$ step) Reagent 2: $0 \text{ or } 10-350 \mu l$ (Adjustable in $1 \mu l$ step)

Reaction System

Reaction cuvette 60 (semi-disposable)

Cuvette washing On board laundry with 7 step washing system

Water consumption 5 - 6 litres / hour

Optical length of cuvette 6 mm Reaction volume 180 - 550 μ l

Reaction time 30 to 600 sec (Depending on the designated cycle time & number of reagents)

Reaction temperature $37^{\circ}\text{C} \pm 0.2^{\circ}\text{ C}$

Optical System

Measurement principle Photometry

Light source Halogen Tungsten lamp with fiber optics

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 K-Factor, Linear (one, two and multi point), Logit-log, Spline, Exponential,

Polynomial (second, third and fourth order)

Calibration points Multipoint curves for up to 6 points execution by repeat run list or auto execution

Auto re-run 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 ControlReal time quality control based on Multi-rule method mean, SD, %CV, R is calculated for all

parameters for sample replicates

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

RS 232 interface/computer

Input Multiformat printout

Output

Dimensions 550 mm (W) x 420 mm (D) x 380 mm (H)

Weight Approx. 23 kgs

AQ 200.EX/1117/ V.01/ IND

Meril Academy



While innovations and advancements play a vital role in contributing towards better health of the society, a larger role also lies in educating and imparting to pathologists, clinicians, technicians and other members of the medical fraternity.





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Toll free No. 1800 266 3745



Meril Diagnostics Pvt. Ltd.

D1-D3, Second Floor, Meril Park, Muktanand Marg, Chala, Vapi - 396 191, Gujarat, India. T: +91 260 3052 100 F: +91 260 3052 125 E: diagnostics@merillife.com

Meril Diagnostics Pvt. Ltd.

601, Midas, Sahar Plaza Complex, J. B. Nagar, Andheri East, Mumbai - 400 059, Maharashtra. T: +91 22 3073 2400 F: +91 22 3935 0777, Customer Care: 1-800-266-3745 (Toll Free) E: diagnostics@merillife.com W: www.merillife.com