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Small and Power Packed

Merilyzer

AutoQuant 100iTM
Vet



IVD

ri More to Life

Merilyzer | AutoQuant 100i™ Vet

There is an increase in the laboratories opting for automation, from manual & semi-automated systems. Meril introduces an Analyzer which is perfect for such laboratories looking for a basic Analyzer meeting its requirements. Meril has designed a Fully Automated Analyzer, AutoQuant 100i™ that offers number of automated features, to enable their users to achieve optimal productivity. AutoQuant 100i™ includes everything from intelligent sample management and remote system diagnostics to automated dilution, calibration and quality control (QC) – and a host of other advanced features.

Reagent & Sample Tray

- 22 refrigerated reagent positions & 22 sampling positions
- Reagent & Sample positions are bar code enabled
- Detachable Reagent Tray
- Peltier based cooling system to maintain temperature between 8 to 12° C
- 20 ml Reagent bottles with dead volume of 750 μ l
- Primary tubes (5 ml to 7 ml) & samples cups can be used
- Continuous loading
- STAT/controls/calibrators can be placed at any position



Figure. 1

Sample, Reagent Probe & Stirrer

- Hydrophobic probes which prevents cross contamination
- Internal and external probe washing
- 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 micro coated stirrer



Figure. 2

Reaction & Optical System Unit

- 60 discrete, dismountable, easily replaceable and reusable cuvettes with 6 mm optical path
- PMMA material which ensures high transmittance with long life of 18 months
- 7-step on board washing
- Cuvettes carry over <1%
- Probe carry over <3%
- Continuous cuvette blank checking, if blank exceeds the limit, cuvette is skipped
- Low water consumption of 3.5 to 4 litres
- Cycle time: 18 secs
- Halogen Tungsten lamp, with fibre optics
- Silicon photo-diode detector
- Photometric system of static filters with total 9 filters (340, 405, 450, 510, 546, 578, 620, 670, 700 nm)



Figure. 3

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- Throughput: Up to 100 Tests / hour for double reagents
- Up to 125 Tests / hour for single reagent
- Up to 200 Tests / hour with ISE (Optional)
- Analysis Method : End Point, Fixed Time (2-point), Kinetic Rate-A, Kinetic Rate-B
- Assay Modes : Colorimetric, Turbidimetry, Single and Double reagent, Multi standard, Mono and Bi – Chromatic
- Random Access with STAT function
- Measurement Principle : Photometry
- Calibration Points: K-Factor, Linear, Logit-log 4P, Logit-log 5P, Spline, Exponential, Polynomial Multipoint curves for up to 6 points
- User defined reflex action
- Low water consumption of 3.5 - 4 litres / hour
- Easy-to-use Windows based software (Windows XP/Windows 7 / Windows 8 / Windows 10)
- Maintenance free Syringe pump with ceramic piston

Cooling System

- Water based cooling system for peltier
- Prolongs the life of peltier
- Reduces Internal heat dissipation helps reducing probable electronics failure
- Ensures high onboard stability of reagents
- 10-12° below ambient temperature



Figure. 4

Software

- Online curve for all types of chemistries
- Pre-dilution & Auto-dilution facility
- Auto rerun - Auto execution based on reagent linearity or substrate depletion
 - User defined reflex testing.
 - User defined carry over pair
- Real Time online monitoring for running status of
 - Sample tray
 - Reagent tray
 - Reaction cuvette
 - Reagent Inventory

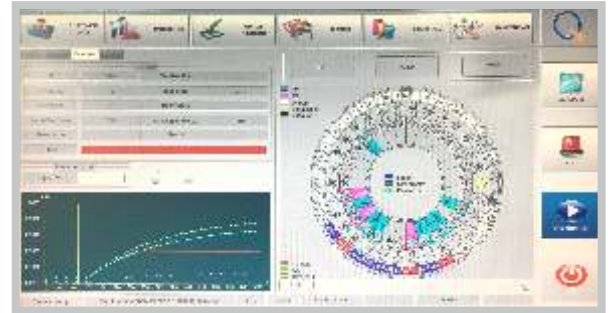
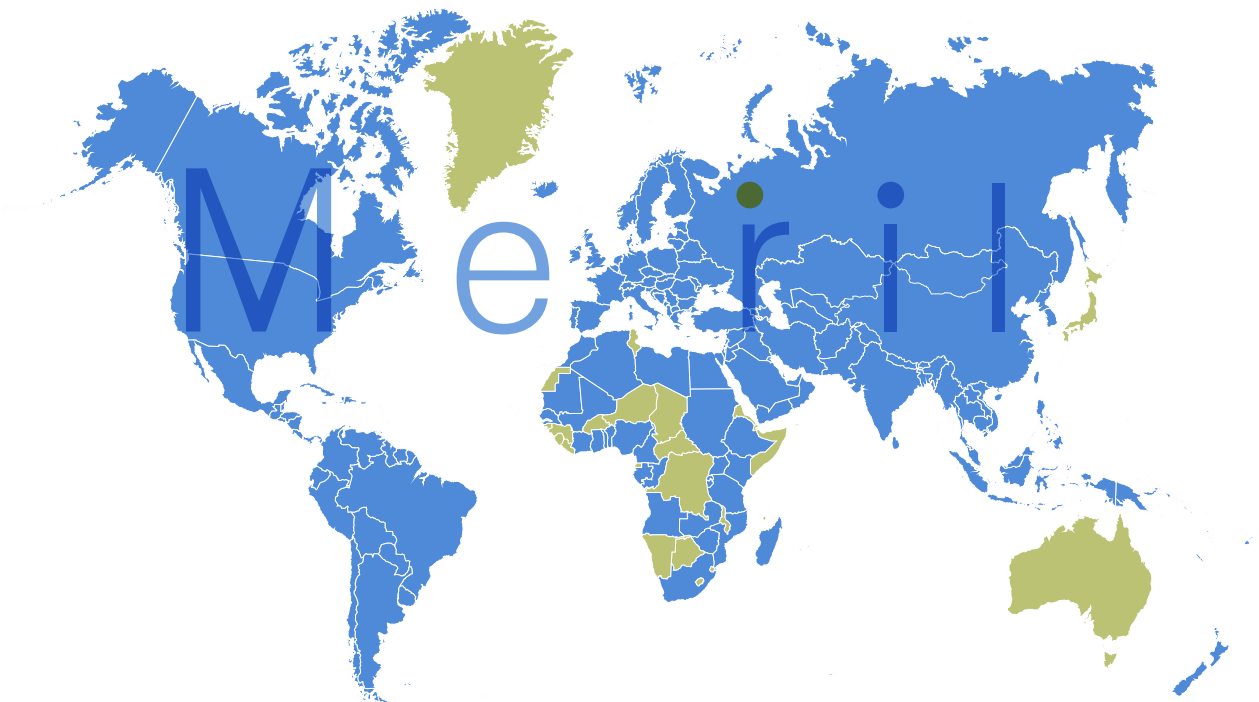


Figure. 5

Global Footprint



Biochemistry 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

Technical Specifications

Throughput	Double Reagent : 100 Tests / hour Single Reagent : 125 Tests / hour With ISE (Optional) : Max 200 Test / hour
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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
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Sample / Reagent handling	
Sample volume	2 - 50 μ l 0.1 μ l step
Sample dilution	Dilution ratio of 2 to 40 time
Reagent position	22 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)
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Reaction System	
Reaction cuvette	60 (Dismountable)
Cuvette washing	On board laundry with 7 step washing system
Water consumption	3.5 - 4 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 and number of reagents)
Reaction temperature	37 \pm 0.2° C
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Optical System	
Measurement	Photometry
Light source	Halogen Tungsten lamp
Wavelength	Total 9 filters (340, 405, 450, 510, 546, 578, 620, 670, 700 nm)
Absorbance range	0 - 3.0 Abs
Resolution	0.0001 Abs
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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
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Data Storage	Test results: Unlimited tests Reaction curve: Unlimited tests Profiles: 12 Within day as well as day-to-day X and X-R control diagram (L-J Graph)
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Quality Control	Real time quality control based on Multi-rule method mean, SD, %CV, R is calculated for all parameters for sample replicates
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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
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Operation System	Windows XP, Windows 2007, Window 8, Windows 10 or Winfix
Input and Output	
Input	RS 232 interface/computer
Output	Multi Format Printout
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Dimensions	550 mm (W) x 420 mm (D) x 380 mm (H)
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Weight	Approx. 23 kgs
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Mat Code	FAACNQ-01