FULLY-AUTOMATED CHEMISTRY ANALYZER
MERIL 400I

About Us

GCMED CORP. is a licensed and duly registered Corporation engaged in the marketing and distribution of highly technical medical products. It is wholly owned Filipino Distributing Corporation whose vision is to provide affordable and quality products and supply that would certainly be of assistance to the pharmaceutical needs of the nation and also engage in diagnostic laboratory equipment.

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Meril 400i

Fully-Automated Chemistry Analyzer

Automated clinical chemistry analyzer designed to deliver fast, accurate, and reliable diagnostic results for medium- to high-throughput laboratories. It supports a wide range of biochemical assays, features user-friendly operation, and incorporates advanced optical and reagent management systems to ensure consistent performance and efficient workflow.

Features

- Throughput: 400 Tests / hour
- Analysis Modes: End Point, Fixed Time (2-point), Kinetic Rate-A, Kinetic Rate-B
- Measurement Principles: Colorimetric (Rate & End point), Turbidimetry Immunoassay
- Facility of STAT function from any free position
- 75 Sample Positions with barcode identification
- 60 Reagent Positions maintained by water cooled refrigeration unit with barcode identification
- Two Reagent Probes and 1 Sample Probe
- 80 Semi Disposable Cuvettes, with cuvette check function before testing
- 9 Static Filters (340, 405, 450, 510, 546, 578, 620, 670, 700 nm)
- User defined Reflex Testing
- User defined Forbidden Pairs
- 7-step Laundry System
- Teflon coated Stirrer
- Calibration Points: K-Factor, Linear (one, two and multi point), Logit-log, Spline, Exponential, Polynomial (2nd, 3rd and 4th order)
- Low water consumption of 6-8 litres per hour
- Easy-to-use Windows based software (Windows XP)

Specifications

Sampling Unit

System Type:	Turn Table type tray
Sample positions:	75 positions
STAT samples:	Any free position
Sampling:	Sample volume: 2-75 μl (0.1 μl steps); Sample replication possible for same test
Sampling probe:	Micro-pipette with level sensor; External & Internal washing with de-ionized water
	Equipped with Vertical & Horizontal obstruction detection facility
Rerun:	Execution by repeat run list or auto execution
Sample dilution:	Dilution ratio: 2X to 40X
Sample identification:	Barcoded for sample details and position

Reagent Unit

Type:	Turn table type tray
Reagent tray:	60 positions for R_1 & R_2
Reagent cooling:	16°C below ambient (cooled with refrigeration unit)
Reagent probe:	Micro-pipette with level sensor;Washing solution: external & internal washing with de-ionized water
	Equipped with Vertical & Horizontal obstruction detection facility
Reagent volume:	Reagent 1: 180 – 350 μl (adjustable in 1 μl steps); Reagent 2: 0, or 10 – 200 μl (adjustable in 1 μl step)
Mixing:	Teflon Coated Stirrer
Reagent identification:	Position ID; Barcode Identification for reagents
Carry over actions:	Wash with System Water/ Select Reagent/ Wash Solution

Reaction Unit:

Type:	Turn Table
Reaction tray:	80 Reaction Cuvettes
Reaction temperature:	37 ±0.2°C
Reaction Time:	30-600 seconds
Cuvettes:	80 Semi Disposable Cuvettes; Optical path length: 6.0 mm; Reaction volume: 180 μl to 550 μl

Optical System:

System:	Multiple wavelength, Post Spectrometer with Fiber optics cable & sealed filters, maintenance free
Light source:	Halogen Tungsten lamp
Linearity:	0 to 3.0
Filters:	9 Static Filters (340, 405, 450, 510, 546, 578, 620, 670, 700 nm)

Calibration & Quality Contol:

Calibration:	Maximum 20 calibrators; 6 calibrators maximum per Chemistry
	One point to multipoint calibration possible with serial dilution for concentrated calibrator
Calibration curve:	K-Factor, Linear (one, two point and multipoint), Logit-log, Spline, Exponential, Polynomial
	Multipoint curves for up to 6 points
Quality control:	Within day as well as day-to-day X and X-R control diagram (L-J Graphs)
	Real time quality control based on Multi-rule method
	Mean, SD, %CV, R calculated for all parameters for sample replicates

Process Management:

Reflex:	Reflex pair can be programmed by defining panic ranges
Monitor function	Offline / Online Reaction curve, Calibration curve and Operation status display
	Real Time Operation Status
Data storage capacity:	Test results: 1,000,000; Reaction curve: 40,000 tests
Report / list format:	Unique Alphanumeric patient id; Report generation: Patient wise, Test wise, Date wise, Doctor / Hospital wise
	Financial statistics to know reagent consumption based on tests and also price for each test
Alarms:	Sample / Reagent depleted, low DI water level and Waste container full
	Detergent level low and bio-hazard container full; Prompts on display with audible alarm
Water Supply:	Approximately 6-8 litres / hour (De-ionized water)

Working Condition:

Power supply:	110/220 VAC, 50/60 Hz (Max. Power 250 W)
Temperature:	15 – 30 °C variation during operation: less than ± 2 °C per hour
Relative humidity:	40 – 80% free from water dew formation
Dimensions:	770 (W) x 640 (D) x 600 (H)
Weight:	Approximately 75 kg