



a  **KPM**
ANALYTICS brand



SAT 450

THE NEW GENERATION OF COMPACT
RANDOM ACCESS ANALYZER



TECHNICAL SPECIFICATIONS

SYSTEM DESCRIPTION	Benchtop, fully automatic, random access, open analyzer for clinical and immunoturbidimetric assays
ASSAY TYPES	- End point, Kinetic, Differential, Bichromatic, Fixed Time and Immunoturbidimetric - up to 999 tests, all user programmable
ON-BOARD REAGENTS	Up to 72 reagents can be located into the refrigerated compartment and distributed on: - 4 removable racks - 50/20/5 ml containers can be loaded - 8 extra positions for 5 ml containers
SAMPLE LOADING	- 4 universal separate racks for continuous loading of samples, calibrators and controls thanks to a dedicated lid (new Main Cover Design) - each rack contains up to 15 cups and/or tubes 10-16 mm diam., 40-100 mm height - 8 extra positions for urgent samples, calibrators and controls - STAT sample execution is allowed at any time
THROUGHPUT	- Up to 440 tests/hour including I.S.E.
READING SYSTEM	- Direct reading, dual channel photometer - 200 l minimum reading volume - 9 narrow band, automatically selected interferential filters 340, 380, 405, 492, 510, 546, 577, 620, 690 - halogen lamp 6V/10W - linear from 0.0001 to 4.200 Abs - high resolution (0.0005 Abs.)
SAMPLING PROCESS	One mechanical arm performs all sampling operations with: - level sensing system (capacitive) - new sampling probe with shock sensor - new reagent pre-warming system at 37°C - automatic probe washing - sample volume range: 2.0µl+ 99µl(0.25 l incr.) - reagents volume range: 0µl+ 350µl(1 l incr.) sample pre-dilution - sample post-dilution - sample post-concentration
REACTION PLATE	Holds 80 cuvettes divided into 4 racks with 20 cuvettes each and performs the following operations: - automatic cuvettes washing - continuous monitoring of cuvettes quality - incubation temperature control at 37°C ± 0.3
COMPUTER (minimum requirements)	CPU: i3 series 9 (or higher) MEMORY: Ram 8 Gb HARD DISK: 250 Gb MONITOR: 17" COMMUNICATION: USB and/or RS232 port HOST COMMUNICATION: RS232 or Ethernet SOFTWARE: Windows 10 or higher
OPTIONAL ACCESSORIES	- Direct potentiometry New I.S.E. module for ⁺ Na, ⁺ K, ⁻ Cl - positive barcode readers for reagents and samples (code 128, codebar, code 2 of 5 interleaved, code 39)
INSTALLATION REQUIREMENTS	POWER SUPPLY: 90 ÷ 250 VAC, 47 ÷ 63 Hz ELECTRIC CONSUMPTION: 386 Watt WATER CONSUMPTION: 1.8 l/h
DIMENSIONS	- 107 x 68 x 53 cm (W x D x H)
WEIGHT	- 49 Kg
ENVIRONMENT	- Room Temperature: 18°C ÷ 30°C - relative Humidity: 20% ÷ 85%

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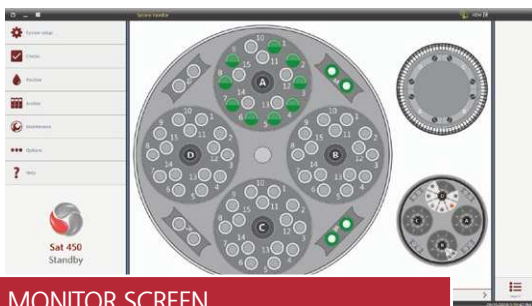
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The **SAT 450** is a fully automatic, random access analyzer, designed to support the modern laboratory in achieving improved cost efficiency, reduced rerun and manual handling. It provides quality results while following rigid quality system procedures and in strict compliance with regulatory agency requirements.

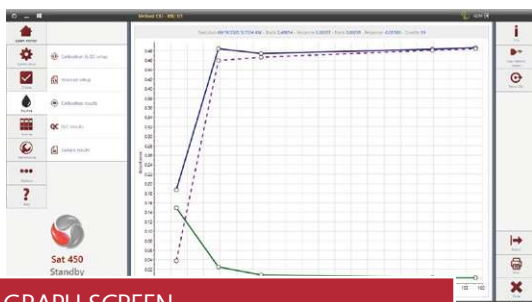
SIMPLICITY

& TECHNOLOGY



MONITOR SCREEN

- real time presentation of samples and reagents status;
- dynamic monitoring of test execution;
- analyzer detailed status with error messages, incubation temperature control, START, STOP, and PAUSE functions.



GRAPH SCREEN

- display of test reaction curves;
- display of test calibration curves;
- Levy-Jennings and Youden QC statistic.

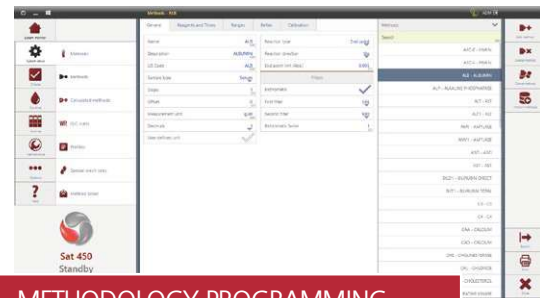


DIAGNOSTIC SOFTWARE

- each instrument part can be singularly tested;
- remote diagnostic capability.

The **SAT 450** operating software runs under multitasking WINDOWS 10.

Its bright touchscreen software simplifies routine work and offers the operator a concise guide through the operating functions.



METHODOLOGY PROGRAMMING

- all parameters are completely user programmable up to 999 methods can be memorized and all settings are user programmable;
- user selectable pre-dilution and re-dilution ratio, samples re-run option and reflex test;

AUTOMATIC DETECTION

- end point limit
- substrate depletion
- fixed time and kinetic reaction linearity

MORE FEATURES

- multilanguage files (user programmable)
- bi-directional communication compliant with ASTM and CLSI standard
- automatic transmission of patients data and results through serial port or Ethernet
- reagents data traceability and management
- Westgard rules management
- Sampling order with Priority management
- Possibility to compare current calibration with any previous calibration
- Preventive maintenance management
- Automatic startup and automatic shutdown procedures

COMPACT

SOLUTION

On board reagents

Up to 64 reagents on 4 separate racks
additional 8 positions
on board storage at $8^{\circ}\text{C} \pm 12^{\circ}\text{C}$
barcode tracking of reagents (optional)
possibility to close the system with dedicated
reagents (optional)



New I.S.E. Module (OPTIONAL)

direct measurement of Sodium, Potassium and
Chloride
easy access for reagents replacement
maintenance-free electrodes
Low Fluids Pack consumption



Practical design

Advanced technology and sophisticated system
engineering allow easy access for maintenance
purposes by simply lifting up the entire
light-weight analytical chassis.





Simplicity, productivity, quality results

a single, heated level sensing arm with Shock Sensor minimizes mechanical complexity and rapidly moves to all positions for:
optimized sample and reagent mixing
up to 4 different reagents addition to each method
sample pre-dilution
sample rerun with or without dilution
probe double washing between each sampling cycle
inner and outer probe washing after every cycle



Cost Efficiency

80 long life, 6 mm optical path, semi-disposable cuvettes (4 separate racks with 20 cuvettes each)
selective cuvettes wash with 3 different liquids: acid, alkaline and neutral
low water consumption: 1.8 l/h
200 l minimum reaction volume
cuvettes quality automatic check



Flexibility

4 universal racks for cups and primary tubes
continuous loading of up to 15 samples on each rack (serum, plasma, urine) thanks to dedicated lid
additional 8 positions
STAT samples loading allowed at any time
standards and controls can be placed on any available rack with no limitations
positive identification of samples (optional)