



LIST OF DEDICATED APPLICATIONS

The SAT 450 has all parameters set based on AMS reagent kits given below.



CLINICAL CHEMISTRY AND IMMUNOTURBIDIMETRY

| Code | Description | Method |
|-----------|------------------------|----------------------------------|
| SA4175 00 | AMYLASE L | Enzymatic CNPG3 |
| SA4201 00 | ALBUMIN L | Colorimetric (BCG) |
| SA4231 00 | BILIRUBIN Total | Colorimetric (Jendrassik-Groff) |
| SA4256 00 | BILIRUBIN Direct | Colorimetric (Jendrassik-Groff) |
| SA4323 00 | CALCIUM ARSENAZO | Colorimetric |
| SA4325 00 | CALCIUM OCP L | Colorimetric |
| SA4330 00 | CHLORIDE L | Colorimetric |
| SA4340 00 | TOTAL CHOLESTEROL L | Enzymatic colorimetric |
| SA4375 00 | HDL DIRECT L | Direct enzymatic |
| SA4380 00 | LDL DIRECT L | Direct enzymatic |
| SA4410 00 | HOMOCYSTEINE L | Enzymatic |
| SA4420 00 | ENZYMATIC CREATININE L | Enzymatic colorimetric |
| SA4450 00 | CREATININE L | Jaffe-mod. |
| SA4544 00 | GAMMA-GT L | Enzymatic |
| SA4546 00 | LDH - L | Enzymatic DGKC (P->L) |
| SA4565 00 | PHOSPHOROUS UV L | Enzymatic |
| SA4575 00 | GLUCOSE L | Enzymatic colorimetric |
| SA4645 00 | MAGNESIUM XB L | Colorimetric |
| SA4710 00 | TOTAL PROTEIN L | Colorimetric (Biuret) |
| SA4740 00 | PYROGALLOL PROTEIN L | Colorimetric |
| SA4815 00 | TRIGLYCERIDES L | Enzymatic colorimetric |
| SA4865 00 | URIC ACID L | Enzymatic colorimetric |
| SA4886 00 | IRON FERENE L | Colorimetric |
| SA4910 00 | GOT/AST - L | Enzymatic IFCC-SCE |
| SA4920 00 | GPT/ALT - L | Enzymatic IFCC-SCE |
| SA4933 00 | ALP - L | Enzymatic DGKC |
| SA4960 00 | UREA UV L | Enzymatic |
| SA4975 00 | CHOLINESTERASE | Enzymatic DGKC |
| SA5418 00 | ENZYMATIC HbA1c | Direct Enzymatic |
| SA5424 00 | GLICOTEST HbA1c | Direct Latex immunoturbidimetric |
| SA5432 00 | CK-NAC L | Enzymatic IFCC |
| SA8422 00 | ASO Latex L | Latex immunoturbidimetric |
| SA8427 00 | CRP Latex L | Latex immunoturbidimetric |
| SA8432 00 | RF Latex L | Latex immunoturbidimetric |
| SA8437 00 | FERRITIN Latex L | Latex immunoturbidimetric |
| SA8439 00 | MICROALBUMIN Latex L | Latex immunoturbidimetric |
| SA8472 00 | IgA L | Immunoturbidimetric |
| SA8482 00 | IgG L | Immunoturbidimetric |
| SA8485 00 | C3 L | Immunoturbidimetric |
| SA8487 00 | IgM L | Immunoturbidimetric |
| SA8490 00 | C4 L | Immunoturbidimetric |
| SA8494 00 | TRANSFERRIN L | Immunoturbidimetric |



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

REAGENTS ON BOARD

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
- each rack contains up to 15 cups and/or tubes 10-16 mm diam., 40-100 mm height
- 8 extra position for urgent samples, calibrators and controls
- STAT sample execution is allowed at any time

THROUGHPUT

Up to 420 tests/hour including I.S.E.
(277 tests/hour photometric)

READING SYSTEM

- direct reading, dual channel photometer
- 200 µl 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 3.200 Abs.
- high resolution (0.0001 Abs.)

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SAMPLING PROCESS

One mechanical arm performs all sampling operations with:

- liquid level sensing (capacitive)
- reagent pre-warming at 37° C
- automatic probe washing
- sample volume range: 2.0 µl ÷ 99 µl (0.25 µl incr.)
- reagent 1 volume range: 2.0 µl ÷ 348 µl (1 µl incr.)
- reagent 2 volume range: 2.0 µl ÷ 330 µl (1 µl incr.)
- reagent 3 volume range: 2.0 µl ÷ 330 µl (1 µl incr.)
- sample pre-dilution
- sample post-dilution
- sample post-concentration

REACTION PLATE

holds 80 cuvettes divide into 4 racks with 20 cuvettes each and performs the following operations:

- automatic cuvette washing
- continuous monitoring of cuvette quality
- incubation temperature control at 37° C ± 0.3

COMPUTER (minimum requirements)

- CPU: Intel or AMD
- MEMORY: Ram 2 Gb
- HARD DISK: 250 Gb
- MONITOR: 17"
- COMMUNICATION: USB and/or RS232 port
- HOST COMMUNICATION: RS232 or Ethernet
- SOFTWARE: WINDOWS XP - VISTA - 7 (32 bit only)

OPTIONS

- Direct potentiometry I.S.E. module for Na⁺, K⁺, Cl⁻ (140 tests/hour)
- 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: 1.5 l/h

DIMENSIONS, WEIGHT & ENVIRONMENT

Analytical Module:

- Height: 50 cm
- Width: 68 cm
- Length: 105 cm
- Weight: 49 Kg
- Room Temperature: 18° C ÷ 30° C
- Relative Humidity: 20% ÷ 85%

All the above features can be changed without prior notice.



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Simplicity and Technology



RANDOM ACCESS ANALYZER

For Routine and Special Chemistry



AMS is a Company of Group



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, PRODUCTIVITY, QUALITY RESULTS



a single, heated level sensing arm minimizes mechanical complexity and rapidly moves to all position for:

- optimized sample and reagent mixing
- up to 3 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

ON BOARD REAGENTS



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

PRACTICAL DESIGN



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

FLEXIBILITY

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

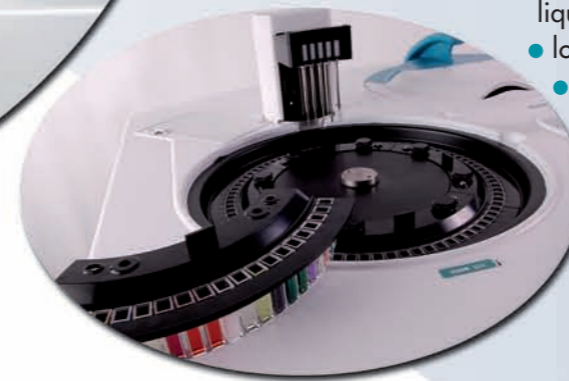
I.S.E. MODULE (OPTIONAL)



- direct measurement of Sodium, Potassium and Chloride
- easy access for reagent replacement
- maintenance-free electrodes

COST EFFICIENCY

- 80 long life, 6 mm optical path, semi-disposable cuvettes (4 separate racks with 20 cuvettes each)
 - selective cuvette wash with 3 different liquids: acid, alkaline and neutral
 - low water consumption: 1.5 l/h
 - 200 μl minimum reaction volume
 - cuvette quality automatic check



SOFTWARE OVERVIEW

The SAT 450 operating software runs under multitasking WINDOWS XP, VISTA and 7 (32 bit only). Its bright graphical user interface simplifies routine work and offers the operator a concise guide through the operating functions.

MONITOR SCREEN (1)

- 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

METHODOLOGY PROGRAMMING (2)

- all parameters are completely user programmable
- up to 999 methods can be memorized
- all settings are user programmable
- user selectable pre-dilution and re-dilution ratio
- user selectable samples re-run option
- test calculation models are user selectable: Factor, Standard, Linear Fit, Point to Point, Quadratic, Cubic, Quartic, Cubic Inv., Log-Logit, Log-Log Cubic

AUTOMATIC DETECTION OF:

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

GRAPH SCREEN (3)

- display of test reaction curves
- display of test calibration curves
- Levy-Jennings QC statistic

DIAGNOSTIC SOFTWARE (4)

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

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

