

CORE 001: Where everything starts

Physical characteristics

SIZE / WEIGHT Height: 40 cm (15.7 in) Weight: 20 kg (41.8 lbs)
 Depth: 60 cm (23.6 in)
 Width: 38 cm (14.9 in)

POWER SUPPLY 100 - 240 Vac, 50 / 60 Hz, single phase with ground
 Fuses: 2.5A @ 230 Vac, 3.15Amp @ 115 Vac Power consumption: less than 150 VA (external PC excluded)
 Ground resistance: less than 0.1 Ohm
 Leakage current: less than 2.5 mA

SAMPLING ARM 1 sampling needle, 75 mm needle stroke
 Capacitive liquid level detector

DILUTER SYRINGE Long life plunger
 Syringe capacity, 368 µL
 Syringe resolution, 0.07 µL

HYDRAULIC SYSTEM 2 self-priming peristaltic pumps with replaceable neoprene cassette
 Optional 3rd peristaltic pump + aspiration needle to empty reaction cuvettes
 Pinch valve
 Containers: Water, 5 L; Waste, 5 L
 Water average consumption: 5 mL / test

REAGENTS TRAY Removable reagent rack 20 bottles, 40 mL or 18 mL
 Optional multiple reagent trays with worklist automatically managed by the software

SAMPLES TRAY Removable tray, 10 numbered positions, tubes of 12 - 13 mm, 3 - 5 mL / cups of 1 mL (cups requires a metal adapter for level detection)
 Optional configuration: 10 reagent positions and 20 sample positions


CUVETTE ROTOR 4 reaction segments of 24 optical cuvettes (single use) total 96

REACTION CELLS Optical path 9.5 mm, 300-500 µL reaction volume
 100W heating resistance, temperature sensor

OPTICAL GROUP 1 halogen lamp (6 V, 10 W) with extended UV emission
 2 focusing lenses, optical glass
 10-position filter disk: 8 positions provided with interference filters of 340,405, 505, 546, 578, 600, 650, 700 nm wavelengths,
 1 free position and 1 solid position for dark reading, ±2 nm on peak wavelength, band pass of ±10 nm

PHOTOAMPLIFIER Photoelectric detector
 Signal amplifier
 Response range, 340 nm to 900 nm
 Photometric range, 0 to 3 Abs
 Linearity, 0.5% from 0.1 to 1.5 Abs
 Precision: 1% CV or 1 mAbs min. (From 0.1 to 1.5 Abs)
 Stability: daily reader offset, less than 1% drift per day

CONTROL Real-time multitasking microprocessor based control
 Easy access to the electronics

EXTERNAL COMPUTER (Minimum requirements for Software  v.1.0)
 CPU: Intel i3 or superior
 RAM: 4GB
 I/O: USB 2.0 port
 Display: minimum resolution 1280x768 OS: Microsoft Windows® 7, 8, 8.1, 10 Framework: .NET framework 4.6

Operation features

PIPETTING Volume: sample, 2 - 300 µL; reagent, 2-350 µL
 Precision: 1.5 CV% at 2 µL; 1 CV% at 4 µL
 Mixing by sample needle upon dispensation

REACTION Reaction volume, 300 - 700 µL

SAMPLE DILUTION In-needle dilution if allowed by method's sample volumes
 Automatic pre-dilution in a reaction cuvette, up to 1:200

TEMPERATURE CONTROL Reagent refrigeration, circa 12 °C below room temperature
 Reaction cells, heating unit can be set from room temperature up to 42 °C ±0.2 °C
 Warm Up time: 30 min from 16 °C room temperature to 38 °C

TYPES OF TESTS Endpoint, Bichromatic endpoint, Differential endpoint, Differential endpoint sample blank, Fixed Time, Kinetic, Kinetic Bichromatic

TEST RUNS Random / Urgent (sample attribute)

MEASUREMENT RATES 145 tests/hour
 Maximum incubation + reading time: 675 or 1350 seconds
 Typical precision, endpoint 2.0 CV% / kinetic 2.0 CV%

CALIBRATION Reagent blank subtraction, 1 to 8 standards per test method, unlimited repetitions on every calibration point
 Linear: factor, linear, linear regression
 Non linear (5 interpolation types): cubic-spline, poly-linear, multi-parameter, logit-log four parameters and five parameters
 Free standard / control positions (5 mL tubes or 1 mL cups)
 Results can be recalculated when changing factor or calibration curve

MAINTENANCE Procedures programmed by component life counters
 Simple yearly maintenance procedure

PRINTING REPORTS Single test, complete sample, work sheet, method and QCs
 Automatic sample reports upon test completion if requested

NEEDLE WASHING Sampling needle washed internally and externally with system solution after every operation

Connections

POWER Standard VDE removable power cord

EXTERNAL PC USB port

HOST/ LIS Ethernet LAN (samples, work list, results)
 Standard ASTM ASCII protocol

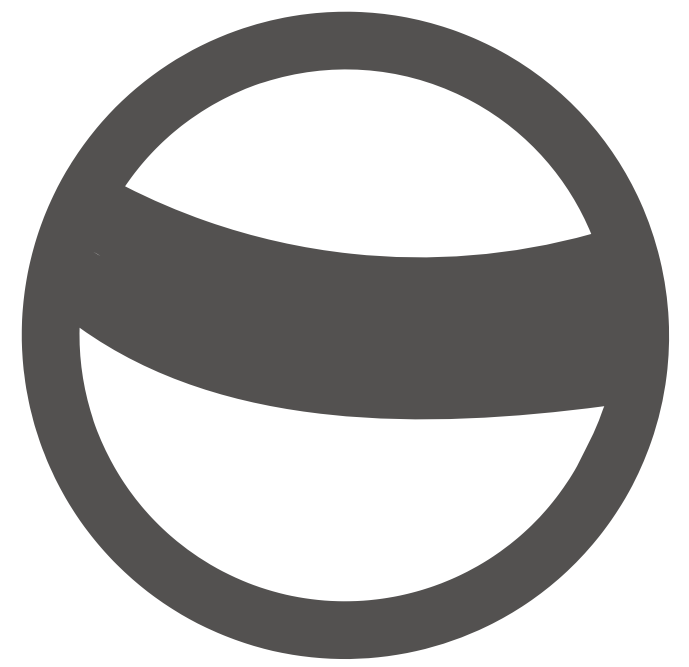
Database

WORKLIST/ SAMPLES For each worklist: unlimited number of samples, unlimited number of tests, up to 99 sheets of tests per worklist.
 Tests archive with powerful search tools
 Patient management

TEST METHODS Unlimited number of methods in PC memory
 80 active methods

QUALITY CONTROL Three-level controls per test, one month monitoring
 Reagent/calibrator/control lot monitoring,
 Exclusion of failing results from graphic and statistics

ERROR LOG Automatically stored at run-time, can be viewed or printed
 Powerful on-line monitoring



CORE