

gesan Chem 200

Technical Specifications

Power Supply: 240 / 100 Vac, 50 / 60 Hrz, single phase with ground On-off switch for Instrument. Independent on-off switch for refrigerated reagent plate. Power consumption: less than 200 VA (external PC excluded)

Sampling Arm: 1 sampling needle, 110 mm needle stroke
Capacitive liquid level detector
Needle shock sensor
Reagent preheat reel

Diluter Syringe: Long life ceramic plunger
Syringe capacity, 500 µl
Syringe resolution, 0.38 µl

Hydraulic System: 8 self-priming peristaltic pumps (life 1000 hrs) with replaceable neoprene cassette (life 500 hrs)
2 vacuum pumps, Pinch valve, Manifold Container: Water, 20 l; Cleaning solution, 2 l; Waste, 20 l
equipped with level sensor and safety connections

Wash Station: Needles: 6 dispensing, 6 aspiration, 1 clearing (8 step washing sequence for each cuvette)

Reagents Tray: Refrigerate and removable rack, 18 or 27 bottles

Samples Tray: (Chem 200 standard) Removable tray, 60 numbered positions, tubes of 12-13 mm, 5 - 7 ml / cups of 0.5-1.5 ml
(Optional) Removable tray, 20 + 20 numbered positions, 20 tubes of 12-16 mm / 20 cups (Hitachi type)

Operation features

Sample Dilution: In-needle dilution if allowed by method's sample volumes
Automatic pre-dilution in a reaction cuvette, up to 1:100

Temperature Control: Reagent refrigeration, about -15 °C below room temperature. Reagent preheating reel, 0 to 100% heat setting
Reaction cells, heating unit can be set from room temperature up to 42 °C ±0.2 °C (108 °F ±0.5 °F)

Types Of Tests: Endpoint, Bichromatic endpoint, Differential endpoint, Differential endpoint sample blank, Fixed Time, Kinetic

Test Runs: Urgent / random

Measurement Rates: 125 tests/hour for double reagent run
Maximum incubation + reading time: single reagent mode, one reading every 20 sec
double reagent mode, one reading every 24 sec
Typical precision, endpoint 2.5 CV% / kinetic 2.5 CV%
Carry-over, lower than 15 parts per million

Cuvette Rotor Reaction Cells: 80 washable BIONEX® cuvettes which allow approximately 20 000 tests for a fully loaded rotor
Optic path 6 mm, 220 - 400 µl reaction volume
100W heating resistance, temperature sensor, safety thermostat

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.
Direct reading reaction cuvettes, 6mm optical path ±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 2.0 Abs ±0.003 Abs
Linearity, ±0.5% full scale
Precision: 1 CV% (0.050 to 1.500 Abs)
Stability: daily reader offset, less than 1% drift for day

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

External Computer (Minimum requirements) Intel Pentium IV family with 2 GHz, 20 Gb HD, 512 Mb ram, CD/R 17" monitor, 1280 x 1024 resolution. Keyboard and mouse RS232 standard COM1 serial port Windows® XP pro with .NET framework 2.0

Start-up: The start-up procedure is run at power-on: self-test, reader offset of optics, wash and check of all cuvettes

Calibration: Reagent blank subtraction, 1 to 8 standards per test method
Linear: factor, linear, linear regression (standard's repetitions)
Non linear (3 interpolation types): cubic-spline, poly-linear and logit-log four parameters.
Free standard / control positions on all the sample plate
Result can be recalculated when changing factor or curve

Maintenance: Procedures programmed by component life counters

Printing Report: 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

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REAGENT PANEL

• Clear displayed of reagents position and liquid level

WORKLIST

Unlimited worklist can be managed simultaneously

- Add or remove test
- Automatic reran for test with error
- Inspect test
- Add test of calibration, blank and Q.C.

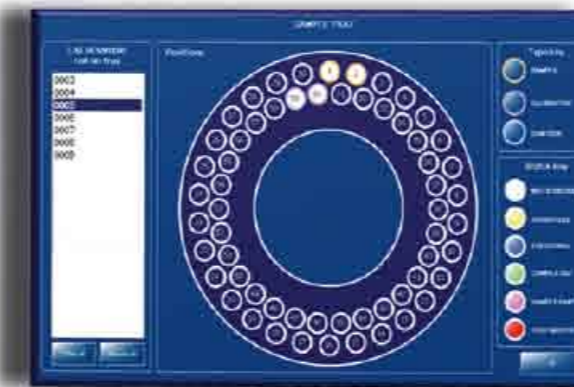


MONITOR

Provides information for each method programmed: scheduled tests, liquid level of reagents available for tests, status of calibration, calibrator, quality control

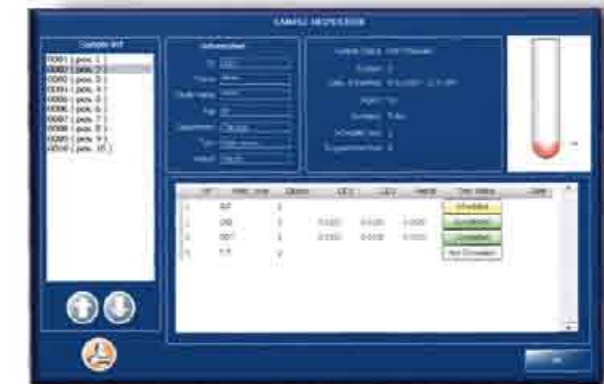
SAMPLES

Display sample status
Add, remove, modified samples, calibrator or control.



SAMPLE TRAY

Exact position on the tray assigned to all samples, calibrators and controls with color coded status of each



SAMPLE INSPECTION

Accurate information on a sample, data and graphic display showing sample volume remaining



TEST INSPECTION

- Data on test selected, result in abs with a graphic representation
- Automatic recalculation of test result using the latest calibration



QUALITY CONTROL

- Provide a Levey-Jennings graphic of all QC result, Mean and CV%

Automatic shut-down and start-up

SAMPLING ARM:

needle stroke, capacitive level detector, reagent preheat,

SAMPLES TRAY:

removable,
60 or 40
positions
tube or cups

CUVETTE ROTOR REACTION CELLS:

80 washable BIONEX® can be replaced ONE BY ONE, long life use (20.000 tests before change it)

REAGENT TRAY:

removable rack, refrigerate, 18 or 27 bottles

WASH STATION:

6 needles for dispensating, 6 for aspiration, 1 for cleaning, 8 step washing sequence for each cuvette

1 Precise diluter syringe

VERY SIMPLE MAINTENANCE

8 peristaltic pump with replaceable neoprene cassette (life 500 hrs), 2 vacuum pump, 1 pinch valve

