Prestige Diagnostics

Autotron 420
Automated Clinical Chemistry Analyser

AUTOTRON 420

High-perormance, automated clinical chemistry analyser with a throughput of 360 tests per hour, (up to 540 with an ISE module).

Features

- 360 tests per hour or up to 540 tests perhour with ISE (optional)
- Open reagent system
- Grating system with 12 wavelengths
- Built in bar code reader (optional)
- 8 step washing system
- Bi-direction LIS interface
- Refrigerated reagent tray with 80 reagent positions
- Comprehensive and intuitive Operating system

CE

AUTOTRON 420
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Reagent System

Multi-functional reagent probe

Interior and exterior probe washing
Liquid level detection
Collision protection
Inventory checking
Reagent volume as low as 20μL
Probe depth adjusts automatically

Refrigerated reagent tray

80 reagent positions for R1, R2, R3, R4
Compatible with Hitachi reagent bottles
24 hours non-stop cooling with peltier element
Ready-to-use stable reagent

Reaction System

Reaction tray

Optimized test sequence to reduce carryover
Total reaction volume as low as 150 μL
Contains 100 reaction cuvettes
Real direct heating
Real-time display of reaction tray temperature

Unique Washing Station

High precision washing liquid control to guarantee washing function
Washing solution pre-heating to prevent any carryover
Maintain ideal temperature for testing
8 steps auto-washing
Separate drainage for high and low concentration waste
Ceramic syringe for auto washing system, high accuracy

High perormance mixer design

Two independent mixers
Optimized homogenization in minimum time
Standardized mixing procedures
Function immediately after sample and reagent pipetted in

Optical System

Unique water-cooling system for light source
Maximum stabilized optical system
Sealed optical system to prevent any dust and disturbance
Reversed optics, grating photometry
Maintenance free

Sample System

Multi-functional sample probe

Interior and exterior probe washing
Liquid level detection
Collision protection
Probe depth adjust automatically
Sample volume as low as 2μL

Multi-functional sample tray

100 sample positions
7 virtual sample disks
Support standard tube, primary tube, EP tube
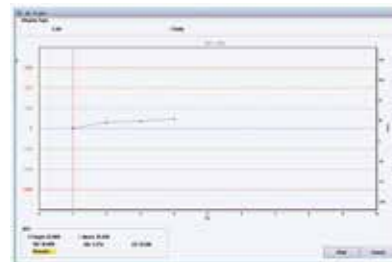Automatic dilution of high concentration sample
Automatic re-run

ISE Module

Optional selection of K^+, Na^+, Cl^-
Throughput - up to 270 tests per hour
6 months shelf life

Operating System

Reaction Curve

Substrate exhaust limit detection
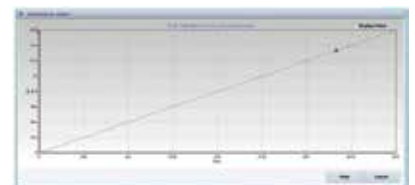Equilibrium point auto search

QC Graph

QC type - real-time QC, daily QC, day to day QC
Control rule - multi-rules QC, intelligent QC alarm

Calibration Setting

Refitting - fitting different types of calibration curve with a certain standard data, thus choosing the best calibration curve

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Parameter setting

Different levels of user permission
Different reference range according to gender and age
Calculated items available
Manual items input available
Automatic re-run
3-150 times auto dilution

Statistics

Calculate the mean value, standard deviation and coefficient of variation
Statistics of reagent usage
Statistics of test volume

Technical Specifications

System Features

Throughput - Up to 360 tests per hour (single and dual reagent). Up to 540 tests per hour with ISE (K^+, Na^+, Cl^-)
Principle - Colourimetric, Turbidimetric
Methodology - End-point, Two-point, Kinetic Discrepant Value
Single/Dual/Triple/Quadruple reagent chemistries Monochromatic/Bichromatic
Programming - Open system with user defined programs and calculation assays
Automatic, Random Access
STAT sample priority, available for all sample positions
Bi-direction LIS interface (HL7)

Sample/Reagent Handling

2 reagent probes, 1 sample probe
Sample Tray - 100 positions
Reagent Tray - 80 refrigerated positions
Refrigeration Temperature - 2-10°C
Reagent Volume - 20-350µL adjustable
R1 - 150-350 µL, 1µL adjustable
R2 - 20-250µL, 1 µL adjustable
Supports R3 and R4
Sample volume - 2-45µL, 0.1 µL adjustable
Sample and Reagent probe - Collision protection, liquid level detection and inventory checking
Probe cleaning - Automatic washing both interior and exterior, carryover <0.1%
Auto dilution - 3-150 times
Pre-heating for reagent
Optional built in bar code reader

Reaction System

Reaction positions - 100 cuvettes
Cuvette - Optical length 5mm
Reaction Volume - 150-500 µL
Reaction temperature - 37°C, ±0.1^{O}C
2 mixing probes
8 step auto-wash system

Measuring and Optical System

Light Source - Halogen tungsten lamp
Photometer - Grating photometry
Wavelengths - 340nm, 405nm, 450nm, 505nm, 540nm, 570nm, 600nm, 635nm, 670nm, 700nm, 760nm, 795nm
Absorbance range - 0-2.500Abs
Resolution - 0.0001Abs

Working Condition

Power Supply - 100-240V, AC 50/60 Hz, 1500W
Temperature - 10°C - 30°C
Humidity - 40-85%
Water Consumption - ≤20L per hour
Dimensions - 1150mm(L)*726.5mm(W)*1150mm(H)

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In Partnership with Rayto Life and Analytical Sciences Co., Ltd.