

Software specifications

Operation

English version graphical operating software, simple interface and user friendly

Real-time online help system, multiple self-monitoring functions

Simple and easy software operating, perfect function, consistent with the use of clinical testing requirement

Multiple report formats , user-defined function

Monitoring and Calculating Function

Automatic monitoring super linear limit, super reference limit, substrate depletion, antigen surplus, no reaction equilibrium point checking program

Serum checking fuction removes interference from hemolysis, blood lipid, jaundice

Against cross contamination program, avoid interference from different reagent

Instrument analysis alarm hierarchical handling to arrange the job sequence by priorities

User authority hierarchical management to enhance system security

Calibration and QC function

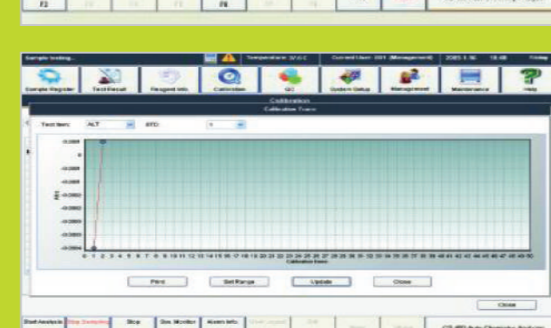
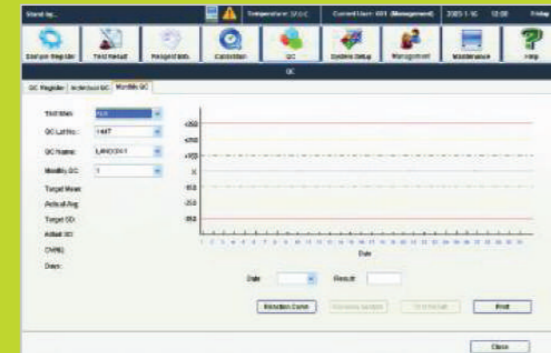
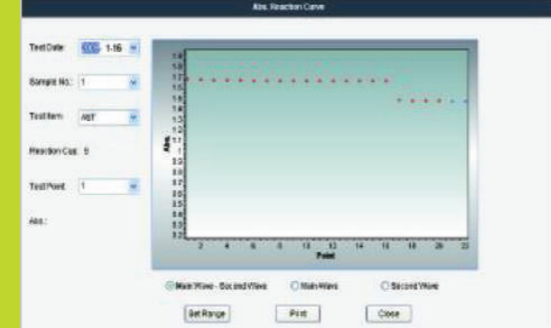
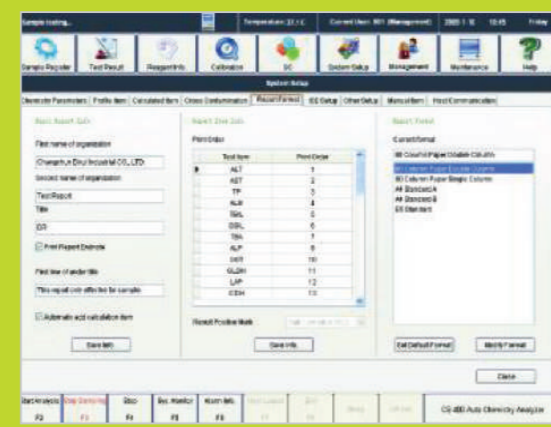
Linear and non linear calibration, which can be set manual calibration and automatic calibration

9 types of calibration curves fitting formula to satisfy different item analysis demand

It has calibration tracing function, depicting calibration K value variation trends, helps to reduce system error

Qc interval and monthly QC ensure that the instrument is working at the best analysis condition

Westgard multi rules, automatic depict and print relevant QC Plot, L-J, Cumulative, Twin Plot



Gesan Chem 400

Auto-Chemistry Analyzer

Overall performance

Equipment type Fully automatic ,discrete, STAT priority
Analysis rate Constant speed 400T/H or 800T/H with ISE
Test principle Colorimetry, turbidimetry, ISE
Analysis method End-point, kinetics, fixed-time, etc. support single/double wavelength and 1-4 multiple reagent item, linear and non-linear calibration
Simultaneous analysis item 88 colorimetric items and 3 ISE items (K, Na, Cl optional)

Sample unit

Sample position 115 sample positions, including 50 routine sample positions, 20 STAT positions, 34 calibration positions, 8 QC positions, 3 wash sotion positions. Continuously cooling at calibration and QC positions to keep 5-15°C within 24 hours
Sample cuvettes specification Standard cup, original blood tube, multi-specification tube available (Φ12-16) mm × (25-100) mm
Sample barcode 12of5, code128, code39, UPC/EAN, code93
Sample volume 2μl-350μl, 0.1μl stepping
Sampling technology liquid level detection, clot detection and collision detection
Sample probe carrying rate automatic warm water cleaning, Carrying rates 0.1%
Automatic sample dilution 3-170 times

Reagent unit

Reagent probe 2, with the function of liquid level detection and collision detection
Reagent volume 20μl-350μl, 1μl stepping
Reagent position double reagent disk, 45X2, continuous 5-15°C cooling within 24 hours, loading 70ml and 20ml standard reagent kit
Reagent barcode code128
Reagent probe carrying rate automatic warm water cleaning, Carrying rates 0.1%

Reaction unit

Reaction cuvette 120 positions optical plastic cup, optical diameter is 6 mm
Total volume of reaction liquid 150μl-450μl
Reaction time random setting within 3-15 minutes
Reaction temperature 37°C, ±0.1°C
Reaction disk constant temperature circulating water
Mixing needle 2, after joining reagent, blending immediately
Reaction cuvette cleaning 7 stops 11 steps by warm water rinsing
Wastewater treatment two diluffence for high and low concentration waste water. With the function of concentrated waste liquid level alarming

Optical system

Light source 20W/12V halogen lamps. Life is 2000 hours
Monochromator Grating photometry
Photoelectron road after spectrophotometry
Wavelength 340nm, 380nm, 405nm, 450nm, 480nm, 505nm, 546nm, 570nm, 600nm, 660nm, 700nm, 800nm
Detector photodiode LED array
OD linear range 0-3.3Abs

Calibration and QC

Calibration method 1 point linear method, 2 point linear method, multiple point linear method, non-linear method
Calibration tracking automatic description calibration K-value trends
QC method real-time QC, days QC and day QC
Out of control processing alarming for out of control sample, record lost control reason

Operating system

PC operating system Windows XP
Analysis control software English version graphical operating software
Main function of software automatic calibration, automatic barcode scanning, item compounding test, reagent info management, serum index, whole reaction process monitoring, dirty cup memory evading, prevent cross-contamination procedure, patient information memory and association input, automatic report audit, data multiple parameter query, report format statistic and printing, reference range classification, alarming information classification, user operating right classification, automatic dormancy and wake, real-time online help
Report printing report formats support the user-defined mode, QC and state information etc
PC configuration CPU ≥2.2GHz(dual-core processor); Memory ≥1G; Harddisk ≥180G; 17 inch LCD display; Stylus, inkjet or laser printer (optional)
System connection TCP/IP network connection, standard RS-232C

Others

Volume 1060mm×790mm×1150mm
Weight 300Kg
Power supply voltage AC 220V±22V, 50Hz±1Hz, power 2KVA
Peak water consumption ≤25L/H



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Gesan Production is
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Gesan Chem 400

Auto-Chemistry Analyzer

Gesan Chem 400



Gesan Chem 400 clinical analyser

With 20 years of experience in clinical chemistry reagent production, Gesan Production also offers Gesan Chem series of analysers that are suitable for every size of laboratory. Gesan Production offers a comprehensive menu of CE marked system reagents, dedicated to Gesan Chem series instruments that combine the latest technologies with applicability to a wide range of tests, economy and reliability, for convenient and precise analysis of clinical samples.

Gesan Chem 400 is designed to demand of medium sized laboratories.

Gesan Chem 400 is a floor standing model that is capable of 400 photometric tests per hour , 400 ISE tests per hour.

Discrete, Random Access , fully automated clinical chemistry analyser

Large sample carousel and refrigerated reagent carousel, meeting all laboratory needs

Precise and reliable optical measuring system

Real-time monitoring of the system

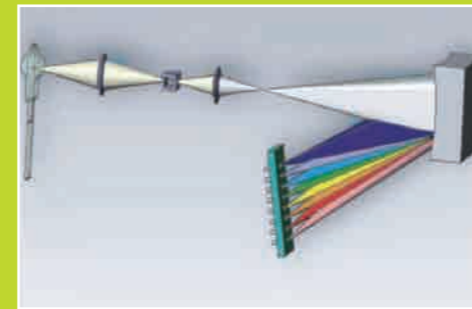
Perfect cleaning system, preventing contamination in all-around way

Automatic cuvette washing system

High stability reaction temperature control

User friendly multi-function software, flexibility for daily operation

LIS/HIS interface, supports remote maintenance



Reaction Mechanism

Rigid plastic reaction cuvette, with good penetrating of UV resistance against acid and alkali and long life span

2 stand-alone teflon coated , "flat-paddle" style stirrers are designed to have the best cleaning effect and start stirring immediately after reagent is added in the reaction cuvette

Using recycling water constant temperature device, automatically changing water and adding defoamer

PID thermostat technology ensures cuvette temperature is 37° C; control variation is +/- 0.1°C

Vacuum draining liquid, 7 stops 11 steps washing by warm water rinsing ensures complete cuvette cleanness

Photometry System

12 different wavelegths (340,380,405,450,480,505, 546,570,600,660,700,800 nm)

Monochromator with holographic concave flat field grating, rear spectrophotometric 12 ways paralel measuring technology, which reduces ambient light intereference to get accurate result

Cluster-condensing light (point light source) technology to reach supermicroanalysis, which saves more reagent

20W/12V long life light source, using containing water cooling method, the best position design, no signal attenuation, strong anti-interference

12 ways photodiode array detector, 12 ways high dynamic range logarithmic amplifier , the range can be 6Abs without distortion. It ensures high concentration sample testing without data overflow

Cluster - condensing light (point light source) technology to reach super-microanalysis, total reaction volume is as less as 150 µL less reagent consume

ISE Unit

400 tests per hour

K, Na, Cl measurement

Automatically rinsing and calibration

37° C pre-heat function for ion reagent

3 syringes for ion reagent sampling, of which are made from long-life porcelain to keep high precision and low maintenance cost 15 µL (serum/urine) sample volume



System specifications

Samples

Total 115 sample positions includes 50 routine sample positions. 20 STAT positions, 34 calibration positions, 8QC positions, 3 Cleaning fluid positions, 8 QC positions and 17 calibration positions maintain 5° C - 15° C cooling condition; the whole disk can be easily replaced with handle

Supports various tubes and trace sample cup, specification (φ12 ~16)mm x (25 ~100)mm

Reagents

Double carousel 90 positions , including two detergent positions, 88 single reagent or 44 double reagent cuvettes, each reagent position can load 70 ml or 20 ml universal reagent cuvette

Reagent disk continuous cooling contition secures the quality of reagent

One reagent, two reagent and up to for reagents testing (R1,R2,R3,R4) functions enable multiple testing items to satisfy the future development needs

Sample/Reagent Pipetting Mechanism

3 stand-alone probes, one probe for sample, two probes for reagent . The probe is polished with nano processing technology which reduces the cross contamination effectively

Automatic liquid level detection

3 stand,alones syringes, one syringe for sample, two syringes for reagent. The syringe is made of long life high-precision ceramic, it ensures high precision of sampling low maintenance cost

3 stand-alone probes contain collision protection function, self-resetting, automatic re-pipeting sample and reagent automatically

Clot detection; Pipeting tube has pressure sensor which can detect the status of clot. The tube contains high pressure rinsing function to clean clot, which ensures the pipeting volume accuracy