aV-280

Biochemistry Auto Analyzer

200 Tests/Hour, Double Reagent

350 Tests/Hour (ISE included)

Validity

Biochemistry Auto Analyzer

aV-280

Reagent tray & Sample tray

- 80 reagent (40R1 + 40R2) & 40 sample positions
- Continuous cooling system with peltier system
- Barcode reader

Reaction tray

- Re-usable 44 reaction cuvettes
- Optimum test results with minimum reaction volume 150µl
- Stable & accurate temperature (37±0.1°C) for reaction

Multifunctional precision sampling probe

- External&Internal specific metal coating with excellent cleaning.
- External & Internal probe surface cleaning function with less carry over risk
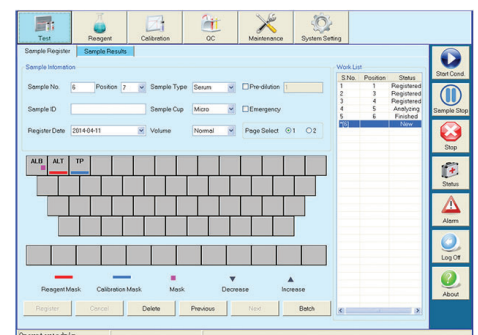- Collision protection function with automated probe vertical level adjustment system

Excellent mixer design

- Teflon coated mixer, no water dropping (reducing carry-over)
- Excellent mixing effect with standard mixing procedure

Advanced operating system

- User friendly interface easy to operate
- Sample automatic dilution (decrease, increase, normal)
- Reaction result automatic checking and warning, calibration result automatic checking, warning alarm log
- Linear & nonlinear calibration, Multi-points calibration up to 8 points
- Quality control apply to westgard specifications, L-J plot, cumulative

High precision ceramic syringe

- Permanent ceramic piston
- Accurate dispensing as low as 0.1 µl

Biochemistry Auto Analyzer

/\Validity
aV-280

Validated Reagent Solutions

After rigorous, detailed CLSI (Clinical & Laboratory Standards Institute) based validation and verification studies /\Validity & archem DIAGNOSTICS cooperation now can provide wide range of dedicated reagents together with original calibrators with metrological traceability as well as controls for Validity Biochemistry analyzer with Archem's reagent manufacturing experience since 1998.

- CLSI based validations can be supplied upon request for any single biochemistry parameter.
- Reagents provided with analyzer – specific wedge barcoded original vials.
- "Advanced Carry Over Evaluation and Prevention System " with reagent- item specific smart wash procedures.
- Preceding and following test sequence design with sophisticated program and deep carry-over experience.

Barcoded Original Pack System

Biochemistry Reagents Panel

Hepatic
Alanine Aminotransferase (ALT)
Aspartate Aminotransferase (AST)
Alkaline Phosphatase (ALP)
γ-GlutamylTransferase (γ-GT)
Direct Bilirubin (D-Bil)
Total Bilirubin (T-Bil)
Total Protein (TP)
Albumin (ALB)
Total Bile Acids (TBA)
Prealbumin (PA)
Cholinesterase (CHE)
Adenosine deaminase (ADA)

Cardiac
Creatine Kinase (CK)
Creatine Kinase -MB (CK-MB)
Lactate Dehydrogenase (LDH)
α- Hydroxybutyrate Dehydrogenase (α-HBDH)
Homocysteine (HCY)

Diabetes
Glucose (Glu) GOD-POD Method
Glucose (Glu) HK Meth
Hemoglobin A1c (HbA1c)
Fructosamine (FUN)

Ferrum
Iron (Fe)
Ferritin (FER)
Transferrin (TRF)
Unsaturated Iron Binding Capacity (UIBC)

Lipids
Total Cholesterol (TC)
Triglycerides (TG)
HDL-Cholesterol (HDL-C)
LDL-Cholesterol (LDL-C)
Apolipoprotein A1 (ApoA1)
Apolipoprotein B (ApoB)
Lipoportein(a) [LP(a)]

Pancreatitis
α- Amylase (α-AMY)
Lipase(LIP)

Renal
Urea (UREA)
Creatinine (CREA) Modified Jaffe Method
Creatinine (CREA) Enzymatic Method
Uric Acid (UA)
Carbon dioxide (CO2)
Microalbumin
Cystatin C (CysC)

Inorganic ions
Calcium (Ca)
Magnesium (Mg)
Phosphate Inorganic (P)

Rheumatism
C-Reactive Protein (High Sensitive HsCRP)
Rheumatoid Factor (RF)
Anti Streptolysin O (ASO)

Immune
Immunoglobulin A (IgA)
Immunoglobulin G (IgG)
Immunoglobulin M (IgM)
Immunoglobulin E (IgE)
Complement C3 (C3)
Complement C4 (C4)
C- Reactive Protein (CRP) (Wide Range)

Others
Glucose-6-phosphate dehydrogenase (G6PD)
Angiotensin Converting Enzyme (ACE)

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Technical specifications

General Information

Machine type	Random access, barcoded reagents
Test speed	Constant 200 tests/hour (Mono reagent or double reagent)
Test principle	Colorimetric method, turbidimetry, kinetic method
Test method	1 point end, 2 point end, Fixed-Time, Kinetics
Calibration type	Linear, Multi point linear, Spline, Logit-Log, Exponential

Sample unit

Sample tray	40 sample positions
Sample tube	Micro cup & test tube & blood collection tube can be used.
Sample volume	2-30µL, step by 0.1µL
Sample probe	Liquid level detection, reagent test quantity monitorization, collison protection
Sample barcode	Sample barcode reader (optional)

Reagent unit

Reagent tray	80 reagent positions (40 for R1 & 40 for R2), In continuous refrigerated compartment for 24 hours 2°C-12°C, open system.
Reagent volume	20-300µl, step by 1µl
Reagent probe	Liquid level detection, liquid volume/level monitorization. Collision avoidance.
Regent barcode	Regent barcode reader

Reaction unit

Reaction tray	44 reaction cuvettes, new technology amorphous reaction cuvettes
Reaction volume	150µl-330µl
Reaction time	10 minutes
Temperature	Peltier sytem incubation technology Temperature fluctuation ± 0.1 °C

Mixing system

Mixer	Separate mixing probe with optimum carry - over avoiding surface

Optical system

Light source	Halogen tungsten lamp
Wavelength	340nm; 405nm; 505nm; 546nm; 578nm; 600nm; 660nm; 700nm (3 more options)
Absorbance range	0-4.0 Abs
Resolution	0.0001 Abs

Washing Unit

Washing Station	4-stage, 2 times automatic washing system. Include specific chemical cleaning function and pump.

Operating system

Operation system	Windows XP, Windows 7, Windows 8, Windows 10
Data processing	Automatic calibration, test combination, effective time management of reagents, serum index, whole process de-tection, linear expansion of enzyme, blank deduction, dirty cuvette memory, cross contamination prevention, patient information memory and association input, automatic report audit, data fuzzy query, report statistics and printing, refe-rence range grading, alarm information classification, user operation privilege classification management.
Report printing	6 formats optional, surpport customization pattern
Interface	TCP/IP network interface

Working conditions

Power supply	AC 110/220V ± 10%, 50/60 Hz, 650W
Water consumption	8 L/hour (maximum)
Dimension	745mm * 540mm * 530mm(L*W*H)
Weight	50 Kg

Validity
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