



AI-140S

Compact Fully-Automatic Chemiluminescent
Immunoassay Analyzer

Point-of-Care Testing

Fastest time to first result: 13 minutes

POCT: Liquid-phase Multi-test Chemiluminescent POCT

- ▼01 Critical Care Testing
- ▼02 Emergency Department / Chest Pain Center / Fever Clinic
- ▼03 Preferred Core Device



AI-140S

Full-Automatic Chemiluminescent
Immunoassay Analyzer

POCT

Convenience
and Flexibility



Chemiluminescence

Accuracy and
Sensitivity



Compact

- ▶ All-in-one desktop design, touch screen operation, fully automatic testing
- ▶ Covers an area of only 0.45 m², compact and practical
- ▶ Multi-test wave-type reagents, eliminating frequent manual loading of consumables
- ▶ Meets the high sample volume requirements of emergency and outpatient departments in tertiary hospitals



Efficient

- ▶ 144T/h: First result available in just 13 minutes, with a testing speed of up to 144 tests per hour (144 T/h)
- ▶ 26 sample positions supporting 2 emergency priority, no manual sample loading required
- ▶ Supports the detection of multiple sample types, including serum, plasma and urine
- ▶ 8 refrigerated reagent positions, compatible with small package size reagent kits (25 tests each), facilitating flexible departmental operations



Intelligent

- ▶ Supports LIS/HIS information system integration, enabling bidirectional LIS communication and two-way information transmission
- ▶ Intuitive touch screen interface, supporting random, batch, emergency and other operation modes
- ▶ Real-time alerts and alarms for abnormal faults; the instrument features real-time self-diagnosis, self-processing and self-protection



Precision

- ▶ Micro-magnetic particle acridinium ester direct chemiluminescence, with superior performance compared to traditional POCT
- ▶ Excellent precision with a coefficient of variation (CV) < 3%
- ▶ Excellent correlation when compared with mainstream imported chemiluminescent systems

Detection Menu

Thyroid Function

Thyroid-Stimulating Hormone	TSH
Total Triiodothyronine	TT3
Free Triiodothyronine	FT3
Total Thyroxine	TT4
Free Thyroxine	FT4
Anti-Thyroid Peroxidase Antibody	TPOAb
Anti-Thyroglobulin Antibody	TGAb
Thyroglobulin	TG
TSH Receptor Antibody	TSHR-Ab
Parathyroid Hormone	PTH
Serum Calcitonin	CT
★ Reverse Triiodothyronine	rT3

Cardiovascular Markers

★ High-Sensitivity Cardiac Troponin T	hs-cTnT
High-Sensitivity Cardiac Troponin I	hs-cTnI
Creatine Kinase-MB	CK-MB
B-type Natriuretic Peptide	BNP
N-Terminal pro-B-type Natriuretic Peptide	NT-proBNP
Myoglobin	MYO
D-Dimer	D-D

Sex Hormones

Follicle-Stimulating Hormone	FSH
Luteinizing Hormone	LH
Prolactin	PRL
β-Human Chorionic Gonadotropin	β-HCG
Estradiol	E2
Progesterone	PROG
Testosterone	TES
Sex Hormone-Binding Globulin	SHBG
Anti-Müllerian Hormone	AMH
★ Estriol	E3

Growth and Development

Growth Hormone	GH
Insulin-like Growth Factor-1	IGF-1
Insulin-like Growth Factor Binding Protein-III	IGFBP-III

Liver Fibrosis Markers

Procollagen III N-Terminal Peptide	PIIINP
Collagen IV	Col IV
Laminin	LN
Hyaluronic Acid	HA

Tumor Markers

Alpha-Fetoprotein	AFP
Carcinoembryonic Antigen	CEA
Squamous Cell Carcinoma Antigen	SCC
Cytokeratin 19 Fragment	CYFRA21-1
Neuron-Specific Enolase	NSE
Progastrin-Releasing Peptide	proGRP
Carbohydrate Antigen 242	CA242
Carbohydrate Antigen 19-9	CA19-9
Carbohydrate Antigen 50	CA50
Cancer Antigen 72-4	CA72-4
Pepsinogen I	PG I
Pepsinogen II	PG II
Gastrin-17	G-17
Cancer Antigen 15-3	CA15-3
Cancer Antigen 125	CA125
Human Epididymis Protein 4	HE4
β-Human Chorionic Gonadotropin	β-HCG
Total Prostate-Specific Antigen	tPSA
Free Prostate-Specific Antigen	fPSA
Prostatic Acid Phosphatase	PAP
Ferritin	FER
S100 Protein	S100

Cytokine Detection

Interleukin-1β	IL-1β
Interleukin-2 Receptor	IL-2R
Interleukin-6	IL-6
Interleukin-8	IL-8
Interleukin-10	IL-10
Tumor Necrosis Factor-α	TNF-α

Thrombosis Markers

Plasmin-α2 Plasmin Inhibitor Complex	PIC
Thrombin-Antithrombin III Complex	TAT
von Willebrand Factor	vWF
t-PA-Inhibitor 1 Complex	t-PAIC
Fibrin/Fibrinogen Degradation Products	FDP
D-Dimer	D-D

Gastric Function

Pepsinogen I	PG I
Pepsinogen II	PG II
Gastrin-17	G-17
★ anti-HP typing	anti-HP typing

Anemia

Folic Acid	FA
Vitamin B12	VB12
Ferritin	FER

Inflammatory Markers

Procalcitonin	PCT
Serum Amyloid A	SAA
High-Sensitivity C-Reactive Protein	hs-CRP
Interleukin-6	IL-6
Heparin-Binding Protein	HBP

Glucose Metabolism

C-Peptide	C-Peptide
Insulin	INS
Glycated Hemoglobin	HbA1C

Bone Metabolism

Bone Gla Protein	BGP
Calcitonin	CT
Parathyroid Hormone	PTH
25-Hydroxyvitamin D	25-OH VD
β-CrossLaps	β-CTX
Total-P1NP	Total-P1NP

Hypertension Markers

Renin	Renin
Aldosterone	ALD
Adrenocorticotrophic Hormone	ACTH
Cortisol	Cortisol

Brain Injury Markers

S100 Protein	S100
Neuron-Specific Enolase	NSE

Infectious Diseases

★ Hepatitis B Surface Antigen	HBsAg
★ Anti-Hepatitis B Surface Antibody	Anti-HBs
★ Hepatitis B e Antigen	HBeAg
★ Anti-Hepatitis B e Antibody	Anti-HBe
★ Anti-Hepatitis B Core Antibody	Anti-HBc
★ Anti-Hepatitis C Virus Antibody	Anti-HCV
★ Anti-Treponema Pallidum Antibody	Anti-TP
★ Anti-Human Immunodeficiency Virus Antibody	Anti-HIV
★ HIV Antigen and Antibody	HIV Ag/Ab

Autoimmune Antibodies

Anti-Cyclic Citrullinated Peptide Antibody	Anti-CCP
★ Anti-Insulin Antibody	Anti-IAA
★ Antinuclear Antibody	ANA
★ Anti-dsDNA Antibody	anti-dsDNA

★ indicates items currently in the registration process

Project Performance

Series	Item	First Result Time	Linear Range	Intra-assay CV	Inter-assay CV
Cardiac Marker	hs-cTnI	15 min	0.01~50ng/mL	≤3%	≤4%
	BNP		15~5000ng/L	≤3%	≤4%
	NT-proBNP		30~35000ng/L	≤3%	≤5%
	CK-MB		2~300ng/mL	≤3%	≤3%
	MYO		10~1200ng/mL	≤3%	≤5%

● High-sensitivity cardiac troponin (hs-cTnI)

The preferred cardiac biomarker in the universal definition of myocardial infarction

● Both BNP and NT-proBNP are detectable

Recommended indicators for heart failure screening, diagnosis, differential diagnosis, severity assessment, and prognosis evaluation

● First cardiac-marker test results available within 15 minutes

Ensure troponin test results are obtained within 20 minutes after blood collection

AI-140S

Small Full-Automatic Chemiluminescence Immunoassay Analyzer

Technical Parameters

Parameter	Specification
System Type	Fully-Automatic Chemiluminescence Immunoassay Analyzer
Model	AI-140S
Detection Principle	Magnetic Particle-Acrininium Ester Direct Chemiluminescence
Testing Throughput	144T/H
Shortest Reporting Time	13 minutes
Operation Type	Touch Operation
Sample Positions	26 sample positions supporting 2 emergency priority
Sample Types	Serum, Plasma, Urine, Others
Reagent Positions	8 Positions (2-8°C Refrigeration)
Reaction plate	120 Reaction Cups Loaded at One Time (On-Line Loading Available)
Gripper Transfer System	High-Efficiency Sample Collection & Transfer Across Work Zones
	Features Sample Tracking & Collision Prevention
Software System	Supports Bidirectional LIS Communication
Operation Mode	Random, Batch, Emergency
Dimensions & Weight	670*670*670 (mm) ,75kg
Reagent Type	Multi-Test Cassette Reagent Kit
Reagent Specification	25T/50T/100T/200T per Cassette

Multi-Scene Application: Outpatient Department, Fever Clinic, Chest Pain Center, Clinical Laboratory



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