

INNOVIQURE

Chemiluminescence Immunoassay Systems

CASCADE

Modular throughput. Three tracks. Two STAT channels.

MODULAR · 600 TESTS / HOUR



600

tests per hour

up to four modules on line

0.1

ppm carryover

steel probe, intelligent cleaning

365

tests / h·m²

floor space efficiency

INNOVIQURE CASCADE

Chemiluminescence Immunoassay Analyzer

A modular system for the busy routine laboratory. Six hundred tests an hour from one module, up to four modules connected on one line, and a three-track sample path that keeps an emergency sample moving while a batch is running.



600

tests / hour

per module, maximum

≤ 9

minutes

time to first result

410

positions

dual channel, incl. STAT and cache

40–60

positions

refrigerated, configurable

● Single or dual sample channel

A single-channel module carries up to 260 sample positions; a dual-channel module carries up to 410, including STAT and cache positions. Non-dumping basket loading keeps racks upright as they are placed.

● Carryover held at 0.1 ppm

A steel probe with intelligent cleaning and dispatch control holds sample carryover at 0.1 ppm. The minimum sample volume is below 5 µL, with sampling accuracy ≤ 5 % and CV ≤ 2 %.

● Three thousand cups on board

Assay cups are loaded three thousand at a time. Substrates use a double-bottle design with online replacement, and wash buffer switches between two containers, with concentrated liquid supported.

● Three tracks, two STAT channels

A dedicated STAT track, a routine track and a return track run in parallel. Two independent STAT channels give an emergency sample priority without stopping the batch in progress.

● Reagent capacity to suit the menu

Reagent capacity is configurable from forty to sixty positions, refrigerated at 2–8 °C, identified by fixed barcode or by RFID.

● Floor space that earns its keep

The analysis module occupies 0.86 m². A single-channel unit returns up to 365 tests per hour for every square metre of floor it stands on.

248 assays across 19 clinical areas

the same menu on every INNOVIQURE analyzer

Thyroid

Fertility & reproductive

Adrenal · pituitary · growth

Prenatal screening

Diabetes

Anaemia & nutrition

Bone metabolism

Cardiac markers

Thrombosis & coagulation

Inflammation & sepsis

Cytokines & interleukins

Tumour markers

Gastric function

Hepatitis · HIV · syphilis

TORCH

Kidney function

Hepatic fibrosis

Interstitial lung disease

Autoimmunity

Dual channel 2100 × 920 × 1238 mm · single channel 1785 × 920 × 1238 mm · analysis module 1150 × 750 × 1238 mm, 360 kg · ≤ 3 kW

Technical specifications

SPECIFICATION	
SYSTEM	
System	Fully automated, random-access chemiluminescence immunoassay analyzer
Format	Modular, 1 to 4 modules connected on line
Measuring principle	Direct chemiluminescence and enzymatic indirect chemiluminescence
Detection systems supported	AE · AP · HRP · ABEI
Result calculation	Quantitative: four-parameter logistic curve fitting (4PLC). Qualitative: cut-off index (COI)
THROUGHPUT AND CAPACITY	
Throughput	600 tests / hour (max), per module
Time to first result	≤ 9 minutes
Walk-away time	> 6 hours
Sample positions single channel	Up to 260
Sample positions dual channel	Up to 410, including STAT and sample cache
Reagent positions	40–60, configurable
Sample loading	5-hole sample rack, basket loading, non-dumping
Transport tracks	Three: STAT track, regular track, return track
STAT channels	2 independent, priority over the running batch
Floor space efficiency	Analysis module 0.86 m ² · up to 365 tests / (h·m ²)
SAMPLE AND REAGENT	
Sample types	Human serum, plasma, whole blood and urine
Sample volume	5–150 µL, sampling accuracy ≤ 5 %, CV ≤ 2 %
Sample tubes	Mixed placement of various primary tube types
Probe	Steel, carryover ≤ 0.1 ppm
Probe detection	Liquid level, empty aspiration, anti-collision, clot detection
Probe cleaning	Surround vacuum cleaning, positive and negative pressure
Dilution	Independent dilution mechanism, automatic and fixed, ratio 1:2 to 1:6400, no speed reduction
Reagent volume	10–200 µL
Reagent refrigeration	2–8 °C
Reagent mixing	On-board magnetic bead mixing
Reagent identification	Fixed barcode scanning or RFID

SPECIFICATION	
REACTION	
Reaction volume	≤ 400 µL
Incubation method	Direct solid heating
Incubation temperature	37 ± 0.2 °C
Reaction mixing	Non-contact eccentric vortex mixing
Washing	Multi-stage magnetic separation with resuspension mixing
Precision	CV < 3 %
CONSUMABLES	
Assay cups	Bulk loading, 3000 at a time
Substrate	Double bottle, online replacement, capacity configurable
Wash buffer	Double container switching, concentrated liquid supported
Liquid waste	Single container for the whole system
Continuity	Reagents loaded during the run; two sets of substrate loaded at the same time
PHYSICAL, ELECTRICAL AND ENVIRONMENT	
Dimensions dual channel	2100 × 920 × 1238 mm
Dimensions single channel	1785 × 920 × 1238 mm
Dimensions analysis module	1150 × 750 × 1238 mm
Net weight analysis module	360 kg
Net weight sample delivery module	152 kg dual channel · 100 kg single channel
Power supply	220 V ± 10 %, 50 Hz ± 1 Hz
Input power	≤ 3 kW
Operating temperature	10 °C to 30 °C
Operating humidity	≤ 85 % RH, no condensation
Altitude	≤ 4000 m

Specifications are subject to change without notice.

One platform

Every analyzer in the INNOVIQURE series runs the same reagent kits, the same calibrators and controls and the same system consumables. A laboratory can move from 120 to 900 tests per hour, or run several instruments side by side, without changing methods, retraining staff or revalidating its menu.

The series

Analyzer	Tests / hour	Sample positions	Reagent positions	Format
INNOVIQURE NEXUS	120	30	10	Bench-top
INNOVIQURE SPECTRUM	200	60	25	Bench-top
INNOVIQURE MOMENTUM	300	60	25	Bench-top
INNOVIQURE CASCADE	600	410	40–60	Modular
INNOVIQURE ATLAS	900	410	60	High volume

System consumables

700101	INNOVIQURE Pre-Trigger Solution	100 mL · 1,000 tests
700156	INNOVIQURE Trigger Solution	100 mL · 1,000 tests
700200	INNOVIQURE Wash Buffer	10 L · 300 tests
700255	INNOVIQURE Enhanced Cleanser	2 × 11 mL
700309	INNOVIQURE Assay Cup	1,000 pcs
700316	INNOVIQURE Assay Cup	1,000 pcs

Quality controls

710018 · 710025 · 710032	INNOVIQURE Liquid Cardiac Markers Plus Control	Levels 1, 2, 3
730016 · 730023 · 730030	INNOVIQURE Lyophilized Immunoassay Plus Control	Levels 1, 2, 3
720017 · 720024 · 720031	INNOVIQURE Lyophilized Tumor Marker Control	Levels 1, 2, 3
740015 · 740022 · 740039	INNOVIQURE Lyophilized Special Immunoassay Control	Levels 1, 2, 3

Reagent kits are supplied in 100 T, 200 T and 400 T pack sizes.

Quality management

EN ISO 13485:2016	MMS-389-1012	ISO/IEC 27001:2022	ISMS-389-1012
EN ISO 9001:2015	QMS-389-1012	EN ISO 45001:2018	OHS-389-1012
EN ISO 14001:2015	EMS-389-1012	GMP	GMP-25.11.322