

ADVIA 1800 Chemistry System

Technical Specifications

Overview

Type of System	Random, continuous access, batch, discrete processing
Throughput Rate	1800 tests/hour: 1200 tests/hour colorimetric, 600 tests/hour ISE
Methods Capacity Onboard	55 including 3 ISE

Sample Handling

Sample Tubes	5 mL, 7 mL, 10 mL tubes, 2 mL sample cups, microcontainer tubes
Sample Tray	84 samples, positive sample identification
Sample Rack Handler (optional)	Universal 5-position rack, 425 total onboard capacity, continuous feed capability
Sample Integrity Check	Qualitative check for hemolysis, lipemia, and icterus
STAT Sample Loading	84, not dedicated
Bar Codes	2 of 5, Code 39, Code 128, Codabar (NW7)
Auto-repeat	Automatic repeat testing from the retained prediluted sample or original sample
Auto-dilution	Automatic dilution from retained prediluted sample
Auto-reflex Testing	Automatic ability to perform 3 additional tests based on results of first test
Primary Sample Probe	Liquid Level Sensing, Crash Protection, Clot/Clog Detection, Liquid Surface Verification

Microvolume Technology

Automatic Sample Predilution	Samples diluted 1:5 (30 μ L sample + 120 μ L saline generates up to 15 tests), retained for auto-repeat until results are available
Predilution Tray	120 dilution cuvettes
Original Sample Volume	2 to 30 μ L; average of 2-3 μ L per test
Average Reagent Volume	80-120 μ L per test
Storage Capacity Onboard	25,200 tests average; 33,300 tests maximum Usage of concentrated reagents increases maximum capacity

Reaction Area

Reaction Tray	221 reusable plastic cuvettes
Cuvette Optical Path Length	10 mm
Reaction Bath	Inert fluorocarbon oil circulation system, 37°C
Photometer	14 fixed wavelengths (340, 410, 451, 478, 505, 545, 571, 596, 658, 694, 751, 805, 845, and 884)
Light Source	12 V, 50 W halogen lamp, cooled by forced water circulation
Assay Methods	Endpoint, rate reaction, 2-point rate, multipoint homogeneous immunoassay
Reaction Times	3, 4, 5, 10, 15, and 21 minutes
Automatic Correction	Serum blank, cell blank, measurement point change, sample volume change in reassay
Point Forwarding	Automatically extends linearity over assay range samples

Reagent Handling

Reagent Tray	2 trays, 56 positions each, refrigerated
Reagent Capacity Onboard	52 colorimetric methods
Dispensing System	2 probes with Liquid Level Sensing and Liquid Surface Verification
Reagent Wedges	20, 40, 70 mL bar-code-labeled wedges
Reagent Inventory Management	Tracks tests remaining, lot number, onboard stability, and expiration date
Reagent Dilutions	Capability to dilute concentrated reagents onboard
Onboard Stability	Up to 60 days

Open System Capability

Channels	200 channels, includes user-defined applications
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3rd Party Applications	Varies by country, can be configured on system

ADVIA 1800 Chemistry System

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ADVIA® 1800 Chemistry System Specifications

ISE

ISE	Indirect simultaneous measurement of Na ⁺ , K ⁺ , Cl ⁻
Sample Volume	22 µL for all three tests
Priming	Automatic priming cycle
Electrode Expected Use Life	30,000 samples, 3 months, or whichever occurs first
Throughput Rate	600 tests/hour; 200 tubes/hour

Calibration/QC

Calibration Interval	Up to 60 days, tracked by software
Auto-calibration/Auto-QC	User-defined time interval or with new reagent container
View Calibration	Graphical display of calibration curves from up to 2 different reagent lots
QC Data	Graphical display of QC, RealTime/QC monitoring
Calibration/Control Tray	61 refrigerated positions for calibrators, controls, and diluents

Data Management

Operating Computer	Windows XP® 1 GB RAM, touch screen monitor 19"
System Documentation	Operator manual and method sheets online
Host Interface	RS 232C bidirectional
Data Storage	70,000 patient tests
Onboard Maintenance Logs	Schedule and monitor routine maintenance activities via software
Host Query	ASCII; system requests work order or batch of work orders from host

General Specifications

Power Requirements	200/220/230/240 V +/- 10%, 20 A, 50/60 Hz, 3 KVA
Water Requirements	Deionized water from pressurized water (10-30 psi/169-207 KPa) Average Consumption: 30 liters per hour
Drain Requirements	Minimum of 10.6 gallons (40 liters) per hour
Dimensions	ADVIA 1800 System (h x w x d): 44.6 x 58.3 x 34.5 in (113.3 x 148.0 x 87.6 cm) Universal Rack Handler (h x w x d): 37 x 29 x 41 in (86.4 x 73.7 x 104.1 cm)
Weight	ADVIA 1800 System: 1,323 lbs (600 kg) Universal Rack Handler: 178 lbs (81 kg)
Compliance	UL, cUL, CE
Noise Specifications	Open cover less than 70 db
Average Heat Output	4,299 BTU/hour @ 50 Hz, 3,023 BTU/hour @ 60 Hz
Operating Temperature Range	18°-30°C/64°-86°F
Ambient Humidity	40%-70%

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Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

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