Technical Specifications

Atellica CI Analyzer

The Atellica® CI* Analyzer addresses big challenges—all in a compact 1.9 m² footprint

siemens-healthineers.com/atellica-ci-analyzer

*Product availability varies by country.
## Technical Specifications

### Product Specifications

**Description**
Integrated chemistry and immunoassay analyzer. Chemistry and immunoassay technologies share no major components to help maximize test throughput while minimizing laboratory footprint.

**Test Throughput**
Up to 1120 tests per hour (up to 600 photometric, 400 IMT, 120 immunoassay)

**User Interface**
Integrated software with intelligent monitoring of supplies, consumables, and common laboratory tasks from the home screen dashboard. User interface includes onboard tools to assist with laboratory accreditation and simplifies training to optimize the user experience with guided workflows, lab evaluation suite, and customizable dashboard.

**Walkaway Time**
2 hours

### Sample Handling

**Validated Sample Types**
Serum, plasma, amniotic fluid, urine, whole blood (assay-specific), CSF, and other

**Sample Integrity Control**
Liquid-level sensing, clot/clog detection, bubble detection, short-sample detection; hemolysis, icterus, and lipemia

**Auto-repeat**
Automatic repeat testing from the original and diluted samples

**Sample Dilution**
Assay-dependent; can be auto-diluted and repeated when results extend linearity

**Auto-reflex Testing**
Configurable; additional tests based on results of first test or test mix

**Sample Carryover Prevention**
Chemistry uses precision wash system.
Immunoassay uses disposable sample tips to eliminate carryover.

**Sample Volume per Test**
2–100 μL of sample (varies by assay)

### Reaction Area

**Reaction Cuvettes**
CH dilution cuvettes (64 reusable cuvettes: four segments with 16 cuvettes each)
CH reaction ring segments (clinical chemistry = 130 reusable cuvettes, 10 segments, 13 cuvettes)
IM incubation ring holds 56 cuvettes.

**Reaction Temperature**
CH: 37°C ±0.3°C, IM: 37°C ±0.4°C

**Chemistry Reaction Detection**
Reaction area: photometer, LED light source with 11 fixed wavelengths (340, 410, 451, 478, 505, 545, 571, 596, 658, 694, 805 nm). Linearity: 0–3.0 AU. Resolution: 0.0001 AU.

**Chemistry Assay Calculations**
Endpoint (EPA), rate reaction (RRA), 2-point rate (2PA), sample blank correction

**Immunoassay Reaction Detection**
Photomultiplier tube

**Immunoassay Reaction Formats**
Sandwich, competitive, and antibody-capture/antigen-bridge formats

**Assay Time**
Chemistry and immunoassay: 1–54 minutes, assay-dependent

### Assay Technology

**Chemistry**
Integrated Multisensor Technology (IMT, electrolytes), photometric, and turbidimetric

**Immunoassay**
Chemiluminescence testing methodology using advanced acridinium ester technology

### Reagent Handling

**Reagent Compartments**
CH: one tray (70 positions), refrigerated, temperature-controlled compartment 4–12°C
IM: 20 primary, 20 ancillary reagent positions with refrigeration and humidity control, continuous and automatic mixing to maintain particle suspension, temperature-controlled compartments 4–10°C

**Reagent Packs**
CH: 50 mL dual-well reagent containers (2 x 25 mL each); 95–2100 tests per pack
IM: ReadyPack® cartridge: 50–200 tests per pack

**Reagent Integrity Control**
Reagent pack barcode identification: automatic pack/well tracking, notification of inventory, calibration and control validity, onboard stability, low and expired reagents, detection of reagent bubbles

**Onboard Stability**
CH: up to 6 months (assay-dependent)
IM: up to 3 months (assay-dependent)

**Dispensing System**
CH: one probe with liquid-level sensing and crash detection
IM: one probe with liquid-level sensing and crash detection

**Barcode-labeled Packs**
Yes

**Average Reagent Volume**
10–100 μL per test, assay-dependent

**Open Channels**
CH only: available. Configurable to assay specifications with ability to copy Atellica CH assays and configure per laboratory needs.

### Integrated Multisensor Technology (IMT) for Na⁺, K⁺, Cl⁻ (CH only)

**Assay Time**
18 seconds

**Sample Volume**
25 μL produces three results

**Sample Dilution**
Automatic 1:10; automatic monitoring for bias with every patient result

**Calibration**
Automatic calibration

**Priming**
Automatic priming cycle

**A-LYTE™ Integrated Multisensor Technology Cartridge Use Life**
Up to 5000 samples or 14 days
Calibration/QC

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Auto-calibration</td>
<td>Automatic calibration orders generated by test definition for CH and IM assays.</td>
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<tr>
<td>Calibration Review</td>
<td>Graphical display of calibration curves for a minimum of 20 different reagent lots and 20 reagent packs for each assay with autovalidation.</td>
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<tr>
<td>Auto-QC</td>
<td>Automatic QC orders generated by test definition for CH and IM assays. Quality control testing can be automatically ordered by day, time, panel, test count, control material, and with calibration orders.</td>
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<tr>
<td>Quality Control Review</td>
<td>Advanced QC package with graphical display of QC in real time, including patient moving averages, Levey-Jennings plots, Westgard rules, RiliBÄK rules; up to 125,000 control results can be stored; autovalidation, archivable to removable media.</td>
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<td>QC/Calibration Material</td>
<td>QC and calibration materials are tracked in the software by test definition and sequence number. Includes onboard stability and interval expiration.</td>
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<tr>
<td>Laboratory Evaluations</td>
<td>Patent-pending assay evaluation suite. Provides onboard support for precision testing, automatic and manual measuring interval verification studies, QC parallel and reagent lot-to-lot testing.</td>
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Maintenance

- **Daily**: Hands-on: <5 minutes; automated: ≤30–45 minutes
- **Weekly**: Hands-on: <4 minutes; automated: up to 75 minutes
- **Monthly**: Hands-on: <5 minutes
- **As Needed**: Refer to online help for additional periodic maintenance.

Logs

- Operator, Maintenance, LIS, and Audit Trail logs monitor activities via the software. Monthly approvals, stored on the system, printable, exportable, and formatted for inspections.

General Specifications

- **Power Requirements**: Voltage: 200–240 VAC, current: 24 A, frequency: 50/60 Hz. 5.0 m power cord with IEC 60309 (6H) 30A/250V 2P+E plug (OUS) or NEMA L6-30 plug (U.S.). IEC 60309 (6H) 30A/250V 2P+E receptacle required (must be supplied by the facility).
- **Power Consumption**: 2.2 kW
- **Water Input Requirements**: Incoming pressure 5–30 psi at 10–30°C
- **Water Quality Requirements**: Special reagent water (SRW) required:
  - Resistivity: ≥10 MΩcm
  - Bacteria: ≤50 CFU/mL
  - Total organic carbon: ≤500 ppb
  A 0.22 micron filter is required at the output stage of the laboratory. An additional 0.22 micron filter is required before the input to the water supply.
- **Maximum Water Consumption**: Up to 25 liters of water per hour at maximum instrument capacity.
- **Drain Requirements**: 76.2 mm (3 in.) drain is recommended to handle minimum of 100 L/hour (1.7 L/min).
- **Dimensions**: (H) 1600 mm, (W) 2034 mm, (D) 934 mm = <1.9 m²
- **Weight**: 760 kg (1675.5 lb)
- **Compliance**: Complies with international environmental, health, and safety standards, including CE and RoHS.
- **Noise Emission**: Complies with NC-43 noise control specification. Average sound pressure of <65 dBA 1 m from analyzer.
- **Processing Heat Output**: 7500 BTU/hr
- **Ambient Temperature**: 18–30°C (64–86°F)
- **Ambient Humidity**: 20–80% noncondensing
- **Altitude**: Up to 2000 meters
- **Floor Load-bearing Requirement**: 400 kg/m², seismic anchoring available
- **Overvoltage Classification**: Category II
- **Pollution Classification**: Degree 2
- **Removable Media**: USB

1 Dimensions with Rack Handler.
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