

ACL *AcuStar* 
HEMOSTASIS TESTING SYSTEM

**A BREAKTHROUGH IN
SPECIALTY TESTING.**

It's about time. And accuracy.



Introducing the ACL AcuStar™:
Unprecedented accuracy. Simple to use.
Innovative hemostatis specialty testing.



The **ACL AcuStar** brings full automation to specialty tests that, until now, have required time-consuming manual processes and highly technical skills. Chemiluminescent technology, designed specifically for the hemostatis lab, allows superior range and sensitivity compared to ELISA or immunoturbidimetric assays.



The ACL AcuStar not only automates and standardizes highly specialized assays, such as Antiphospholipid* and Heparin-Induced Thrombocytopenia,** but also enhances assay performance on routine tests.

Advanced assay technology, complemented with end-to-end automation, provide a quantum leap in simplicity and throughput, while ensuring uncompromised results. The ACL AcuStar is a genuine breakthrough for hemostasis labs with demanding needs, combining testing accuracy and efficiency in ways never before possible.

- Highly sensitive immunoassays significantly improve performance
- Specialty assays fully automated
- Self-contained, ready-to-use reagent cartridges, stable up to six weeks onboard
- Assays onboard and available 24 hours/day, 7 days/week
- Assay calibration on lot change only
- Random access: no batching required



ACL AcuStar Test Menu

Comprehensive HemosIL® line of high-performance chemiluminescent assays, with more on the way.

<p>D-Dimer*</p>	<p>The first fully automated chemiluminescent D-Dimer assay for the hemostasis lab</p> <ul style="list-style-type: none"> • Aids in the diagnosis of VTE • Superior working range, sensitivity and specificity compared to ELISA and immunoturbidimetric assays • Provides rapid turnaround time and availability 24 hours/day, 7 days/week
<p>aCL IgG* aCL IgM* β₂GPI IgG* β₂GPI IgM*</p>	<p>The first fully automated Antiphospholipid Panel</p> <ul style="list-style-type: none"> • Complete diagnostic menu for Antiphospholipid Syndrome • Differentiates assay Ig isotypes • Reduces test time significantly • Consolidated test panel replaces traditional ELISA assays
<p>HIT IgG** HIT Total Ab**</p>	<p>The first fully automated HIT Panel</p> <ul style="list-style-type: none"> • Provides rapid turnaround time and availability 24 hours/day, 7 days/week • Eliminates batch testing • Helps clarify suspicion of Heparin-Induced Thrombocytopenia • IgG and Total Antibodies covers any diagnostic approach
<p>VWF Ag** VWF:RCo**</p>	<p>From VWD screening to VWD typing</p> <ul style="list-style-type: none"> • Enhances analytical performance for VWD typing • Higher sensitivity of VWF Ag • True VWF:RCo sensitive to Type II VWD

*Not available in all countries

**In development

Innovation through state-of-the-art chemiluminescent technology.

The ACL AcuStar is the first instrument to introduce chemiluminescent technology in hemostasis testing. Developed specifically for hemostasis specialty testing, the unique characteristics, in combination with our innovative assays, significantly improve testing accuracy, assay range, sensitivity, and specificity, while saving valuable time.

Broad sensitivity and working range

- Chemiluminescence is an analytical technique with a wide working range and ability to detect very low concentrations of analytes, other assay designs cannot match.
- With chemiluminescent assays, the tracer (such as an antibody covalently linked to isoluminol) binds specifically to the target of the assay, emitting light when an oxidizer and catalyst are added.
- The light detector in the ACL AcuStar is highly sensitive and detects extremely low levels of light, significantly increasing the linearity (or working range) versus typical colorimetric assays.
- Example: working range of ACL AcuStar chemiluminescent D-Dimer assay is almost ten times greater than other D-Dimer assays.

Ability to differentiate among Ig isotypes

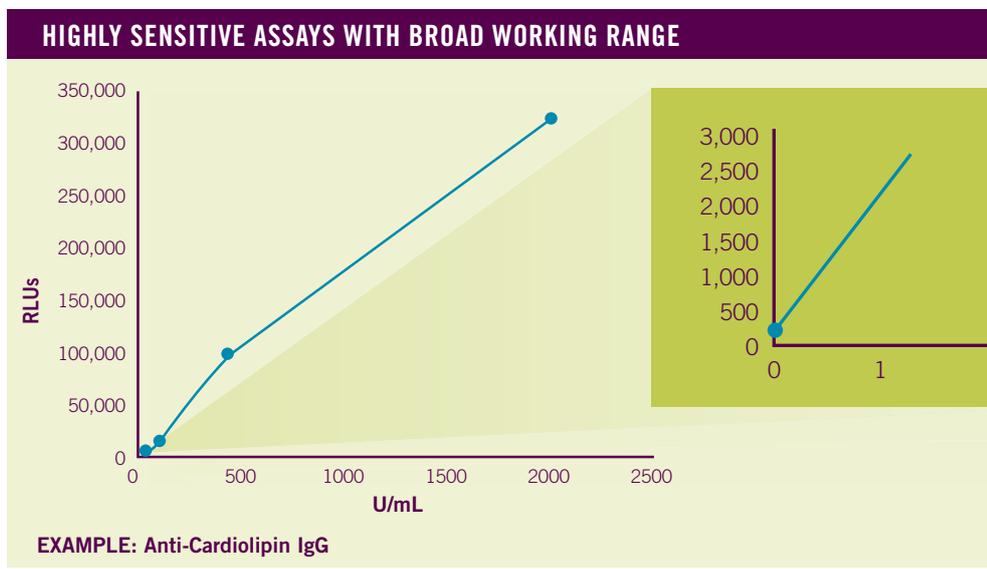
- Avoids false positives from non-disease-causing isotypes
- Provides specific isotype, yielding clinically significant results, rather than simply detecting the presence of all antibodies
- Assays that cannot differentiate among isotypes, may yield false high results due to detection of other non-disease-causing isotypes

No optical interference

Contaminants in blood samples increase absorption at different wavelengths. In a colorimetric assay, if absorption occurs, it can result in optical interference leading to falsely elevated readings.

Chemiluminescent assays on the ACL AcuStar have no optical interference because:

- Light is not emitted unless all three reagent components are present
- Contaminants are efficiently washed away



Highly sensitive:
RLU (lower limit cutoff) = 0.51

Innovative cartridge design offers unmatched simplicity

Innovative design enhances the testing experience for laboratory professionals—every step of the way.

- 1 Patented magnetic bead chamber resuspends reagent before pipetting of solid support into reaction cuvette for consistent reproducibility.
- 2 All reagents needed for reaction are contained within chambers of cartridge, eliminating confusion of multiple reagent vials used in standard ELISAs.
- 3 Covered probe access holes minimize reagent evaporation.
- 4 Barcode automatically imports assay type and calibration curve, facilitating assay set up.



Unprecedented simplicity is here.

Automates and standardizes testing that, until now, required advanced training and depended heavily on manual processes. Makes setup and testing simple.

'1-2-3 Step' Easy Assay Setup

- 1 LOAD ASSAY CARTRIDGE**
Automatically reads cartridge barcode and imports master curve.
- 2 ADJUST CALIBRATION** *(for cartridge lot change only)*
Uses two calibration levels, included in kit, to set up working curve. Master curve adjusts automatically.
- 3 RUN QUALITY CONTROL**
Reads control type and assay from barcode and runs QC tests.

'1-2-3 Step' Easy Sample Setup

- 1 LOAD BARCODED SAMPLE**
Automatically queries LIS for test programming.
- 2 PRESS "START"**
Automatically performs analysis and generates results.
- 3 GET RESULTS FAST**
Results automatically calculated for each assay.



Uncompromising quality is here.

Innovative design includes numerous features that provide a rewarding testing experience for laboratory professionals—every step of the way.



Complete test panel

- D-Dimer*
- Antiphospholipid panel*
- HIT**
- VWF**

Simple to use

- No reagent handling: self-contained, ready-to-use, precalibrated reagent cartridges
- Integrated barcode reader for cartridges and samples
- Cartridges refrigerated at 4°C and stable up to six weeks onboard
- Easy rack-loading system accommodates up to 30 samples
- Windows® interface and touchscreen, flat LCD monitor with intuitive prompts

Fast and efficient

- Unprecedented efficiency for key specialty assays
- Up to 20 reagent cartridges onboard
- Up to 20 different assays onboard and available 24 hours/day, 7 days/week
- Up to 60 tests/hour
- Time to first results: ~30 minutes
- STAT or batch sample processing

Highly accurate

- Automated chemiluminescent technology boosts accuracy and sensitivity
- Each assay is factory precalibrated to assure accuracy and standardization
- High sensitivity (secondary antibody linked to isoluminol as tracer)
- Broad working range with one-stage or two-stage immunoassays
- No optical interference
- Differentiation among Ig isotypes

Reliability

- Automatic reflex testing
- Automatic results validation
- Westgard multi-rules
- Levey-Jennings charts

*Not available in all countries

**In development

Reagent cartridge area



Reagent cartridge



Sample area



ACL AcuStar Technical Specifications

Detection technology.....	Chemiluminescence	Results autovalidation.....	YES
Continuous sample loading.....	YES	Security system.....	YES (configurable)
Continuous reagent loading.....	YES	Events log system.....	YES
Continuous operation.....	YES	Bi-directional interface.....	YES
Samples transport system.....	Sample racks	Host query function.....	YES
Samples onboard.....	30 (5 per sample rack)	PC.....	External (dedicated)
Reagents transport system.....	Cartridges	Operating system.....	Windows XP
Reagents onboard.....	20 (refrigerated)	Monitor.....	15" color LCD touchscreen (external)
Reagents barcode reader.....	YES (integrated)	Keyboard.....	YES (external)
Barcoded reagents.....	YES (barcode includes lot, exp. date and size)	Mouse.....	YES (external)
Cuvettes onboard.....	280	Printer.....	YES (external)
Tests per sample.....	20	User interface.....	Windows XP-based
Throughput.....	~ 30 min. to first result, 60 samples/hr.	Unit dimension h x d x w (cm).....	54 x 62 x 87
Rerun testing.....	YES (configurable)	Weight (analyzer).....	77.25 kg

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