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# Meet expanding needs with a proven, integrated system.

The Dimension EXL family of systems offers you a choice of solutions with our patented LOCI technology inside.

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Answers for life.



## Versatile, Fast, Accurate, and Easy-to-use—the Dimension EXL Family of Integrated Systems

Dimension EXL Integrated Chemistry Systems can be found in laboratories running 50,000 tests per year and supporting high-volume Siemens automation solutions in laboratories running millions more.

Dimension EXL with LM  
Integrated Chemistry System



Dimension EXL 200  
Integrated Chemistry System



### The Multifaceted Dimension EXL Family of Integrated Systems

Siemens Healthcare Diagnostics was the first to integrate chemistry and immunoassay testing on a single platform, and has increased immunoassay efficiency on the Dimension® EXL™ family of systems with our patented LOCI® advanced chemiluminescent technology. This technology processes immunoassay tests more quickly, while increasing the reliability and sensitivity of test results.

“The Dimension EXL system with the LOCI module helps us contribute to better patient care because it’s faster and it’s more accurate,” says Donna Hartsell, Section Head of Chemistry at Caldwell Memorial Hospital in Lenoir, North Carolina. “I feel very confident about the results that we send out. I trust the instrument explicitly.”

The Dimension EXL family of systems can be found in thousands of low-volume, mid-volume and STAT laboratories worldwide. Dimension EXL systems are also used in satellite laboratories partnered with a Siemens automation solution in the core laboratory.

The Dimension EXL family of integrated systems reduces process pre-analytics associated with splitting sample tubes in order to run samples concurrently on dedicated stand-alone chemistry and immunoassay systems. Dimension EXL systems also feature a comprehensive menu that covers the majority of critical laboratory assays and simultaneous processing capabilities with:

- One sample area
- A common reagent area
- Common reagent packaging

“The Dimension EXL system performed great,” says Tim Schroeder, Laboratory Manager at Marengo Memorial Hospital in Marengo, Iowa. “This is a 21st century instrument that will allow us to expand our test menu and outreach services.”

# Implement LOCI Technology— Only from Siemens

LOCI® advanced chemiluminescent technology, featured on the Dimension EXL family of systems, combines small sample sizes, high-performance assays, and just three processing steps to quickly deliver patient results.

• **Improved Assay Performance**

LOCI advanced chemiluminescent technology is the first and only homogeneous chemiluminescent immunoassay technology with direct measurement available on a commercial automated system. This patented technology provides rapid turnaround times (TATs) with excellent reliability and reproducibility.

• **Reduced Process Steps**

The unique oxygen channeling technology of LOCI streamlines the process of running an assay into three simple steps: mix, incubate, and read. This eliminates extra steps of separating, washing, and adding amplification reagents that are necessary with standard heterogeneous immunoassays.

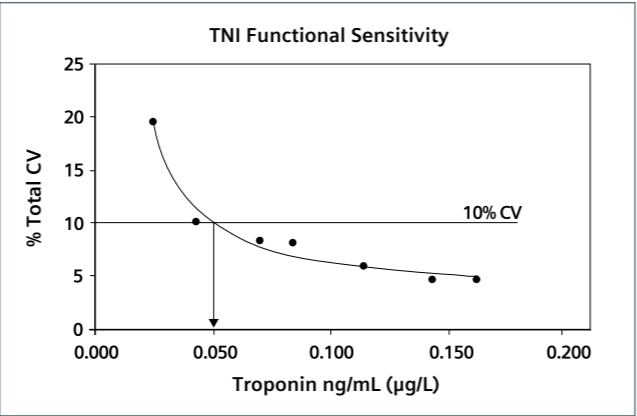
• **Reliable Results with Low-sample Volumes**

LOCI methods use low sample volumes (all analyte tests can be performed with just 8 to 20 µL of sample) because of the sensitivity of the technology and elimination of washing/ separation steps. Low sample volumes reduce the risk of nonspecific binding (NSB). This, along with method-specific NSB-suppressing agents, increases the reliability of LOCI test results.

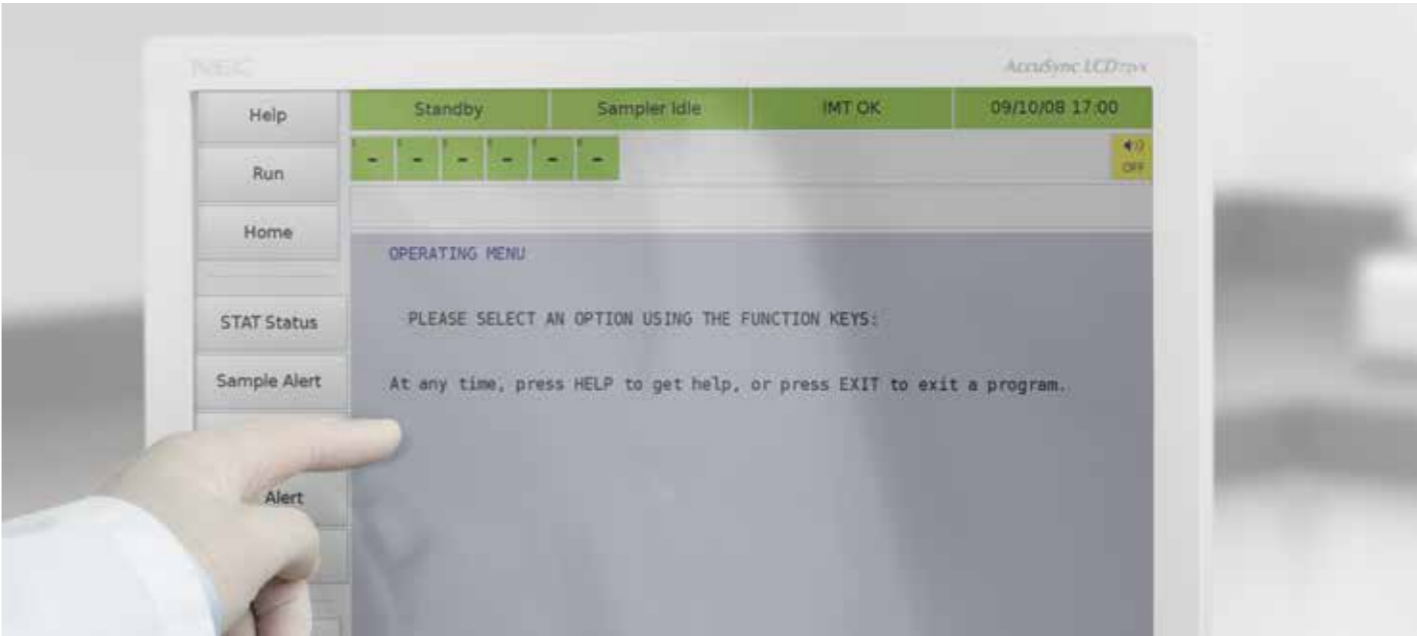
• **Rapid TAT with LOCI Cardiac Troponin I (TNI) Assay**

The TNI assay on the Dimension EXL family of integrated systems meets the standard of performance for accurate

and rapid results required for timely diagnosis of acute myocardial infarction (AMI). It allows for early detection by meeting the guidelines criterion of  $\leq 10\%$  CV at the 99th percentile population, supports the rapid triage of chest-pain patients, and improves acute-care workflow between serial measurements (6h reduced to 3h protocols) with an 11-minute time to first result, utilizing either a plasma or a serum sample.



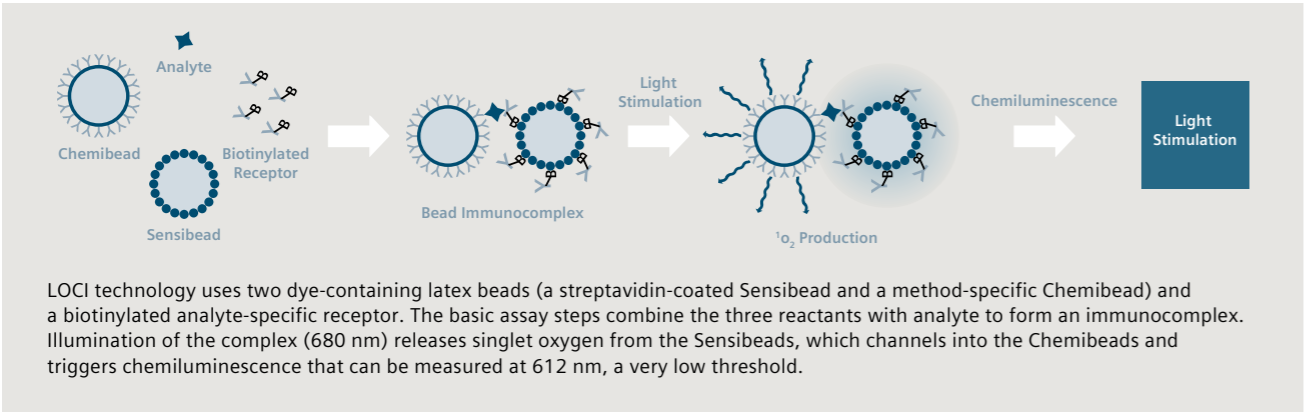
The Joint European Society of Cardiology/American College of Cardiology Committee recommends an imprecision level (coefficient of variation, CV) for troponin assays of  $\leq 10\%$  at the 99th percentile of normal.



*“The advent of LOCI technology has enabled a breakthrough in the measurable levels of functional sensitivity and precision of various assays, specifically the cardiac tests such as troponin I, where sensitivity at the 99th percentile of the reference control population is crucial. Siemens has hit a home run with these assays.”*

Robert H. Christenson, PhD, DABCC, FACB  
Professor of Pathology, University of Maryland School of Medicine

## How LOCI chemiluminescent technology works:



LOCI technology uses two dye-containing latex beads (a streptavidin-coated Sensibead and a method-specific Chemibead) and a biotinylated analyte-specific receptor. The basic assay steps combine the three reactants with analyte to form an immunocomplex. Illumination of the complex (680 nm) releases singlet oxygen from the Sensibeads, which channels into the Chemibeads and triggers chemiluminescence that can be measured at 612 nm, a very low threshold.

# Deliver Fully Integrated Chemistry and Immunoassay Testing from Your Laboratory



- Completing the integration of technologies on the Dimension EXL Integrated Chemistry Systems are:**
- Heterogeneous immunoassay menu, including immunosuppressive, oncology, and reproductive endocrinology
  - QuikLYTE® IMT for Na, K, and Cl results in 58 seconds
  - Flexible photometry: routine and specialty chemistry tests, therapeutic drug monitoring, and drugs-of-abuse and toxicology testing with Syva® Emit® reagents

Choose the right system for your laboratory based on reagent capacity and footprint

Reagent capacity	88 Flex + 3 IMT = 91	44 Flex + 3 IMT = 47
Footprint	2.2 sq m (23.3 sq ft)	1.5 sq m (16.2 sq ft)

- Which Dimension EXL system is right for your laboratory?**
- Siemens has the right solution for your laboratory. With the Dimension EXL family of systems, you can increase your efficiency and productivity while taking advantage of the latest technology in an integrated system. Both the Dimension EXL with LM Integrated Chemistry System and the Dimension EXL 200 Integrated Chemistry System offer:
- Continuous loading
    - No need to pause the systems to load samples, reagents or consumables
  - Ready-to-use operation
    - No reagent preparation with Flex® cartridges
    - No manual pretreatment of whole-blood samples
    - No cuvette carryover with disposable reaction cuvettes
  - Workflow excellence
    - Validated calibration of up to 90 days
    - Automated onboard calibration for IMT
    - Low daily, weekly, and monthly maintenance
  - Universal STAT positions

**Throughput**

Samples per hour (up to)	200*
Photometric tests per hour (up to)	440
IMT tests per hour (up to)	187
HM tests per hour (up to)	167

\*On the VersaCell X3 Solution/Dimension Suite.



# Discover How High-level Productivity Can Improve Your Laboratory Today



Siemens provides customers with the technical expertise and guidance they need 24 hours a day, 7 days a week.



Dimension Suite provides one-touch sample management and STAT prioritization for an extensive mix of analytics.



CentraLink Data Management System delivers quality laboratory results faster for better patient care.

## Work with Siemens as Your Trusted Partner

Working closely with laboratorians, clinicians, and hospital administrators, Siemens Healthcare Diagnostics creates innovative solutions that transform diagnostics by enhancing operational efficiencies and helping to improve patient care. Committed to being your single source for diagnostic instruments, service, and support, Siemens offers a Personalized Education Program (PEP) to help your staff maximize their productivity. Siemens representatives will give your laboratory dedicated technical support online or in person, wherever and whenever service is needed. You can be confident in the workflow resources Siemens offers to enhance the operations of your laboratory.

“Service and support from Siemens is excellent. It always has been,” says Hartsell. “The call center gets back to us within 30 minutes and 9 out of 10 times, the service rep does too.”

Siemens Remote Service for Diagnostics (SRS), part of the Siemens Customer Care program, is a real-time remote service that connects your instruments with continuous access to global technical support from Siemens. Delivered through a secure network, SRS increases system uptime and efficiency by identifying issues early, resolving them remotely, and expediting on-site repair if required.

## VersaCell X3 Solution/Dimension Suite and IT Solutions Available from Siemens

The VersaCell® X3 Solution/Dimension Suite delivers extensive menu coverage, excellent STAT priority management, and automation benefits that improve workflow to sustain a high level of productivity in the mid-volume laboratory.

CentraLink™ Data Management System, an integral part of Siemens’ proven laboratory solutions, empowers labs to efficiently deliver timely, accurate results by customizing and streamlining workflows across automation, analyzers, and IT.

## Let's get started!

Select from the Dimension EXL family of systems for the next level of proven chemistry and immunoassay integration on a single platform. Get rapid, accurate immunoassay results with the sensitivity and speed of LOCI technology.

Visit [www.siemens.com/diagnostics](http://www.siemens.com/diagnostics) to learn more about the Dimension EXL systems and LOCI advanced chemiluminescent technology.