Process Insights™

Premium Insights Into Process

PRODUCT BROCHURE

LAS-1000™

Liquid Autosampler for Seamless Integration into the XT Series Laboratory Analyzer for Total Sulfur-Total Nitrogen

ATOM INSTRUMENT

Precision

Outstanding Repeatability

Easy to Use

- Designed for ASTM D6667 and D4629 Applications
- Accurate and Precise Sample Handling
- XYZ-axis Vectorized Movement
- Fully Servo-motor Controlled
- Full Integration with XT Series Software
- Convenient Compact Footprint
- No Additional Benchtop Space Required

We offer the necessary tools and accessories to meet the growing needs and challenging demands of the analytical world. The LAS-1000™ Liquid Autosampler is built for ultra fast, reliable, efficient and safe handling of liquid samples and integrates seamlessly into the XT Series Laboratory Analyzer Total Sulfur – Total Nitrogen Solution.

The liquid autosampler does not require any additional benchtop space for operation. When combined with the XT Series it provides unmatched analytical performance making it highly versatile and suitable for a wide variety of applications and industries.

Enhanced Features

The LAS-1000 is mounted directly on top of the XT Series analyzer eliminating the need for additional benchtop space. The use of servo-motors allows rapid, precise and accurate control of movements and eliminates routine maintenance needs. The use of XYZ-axis vectorized movement for sample handling reduces the time needed for operations.

- Large sample capacity: 162 Vials of 2 mL per tray holder with up to 2 trays holders
- Syringe protection with missing vial detection
- Optimized movement for highest sample analysis rate
- Highly reproducible injection
- Faster analysis for higher throughput

Outstanding Repeatability

The LAS-1000, combined with the XT Series Analyzers, ensures optimal analytical performance. Autosampler injection repeatability below 0.60% RSD and linearity R>0.9999 allow the LAS-1000 combined with the XT Series to achieve 30 ppb repeatability for both total sulfur and total nitrogen measurement.
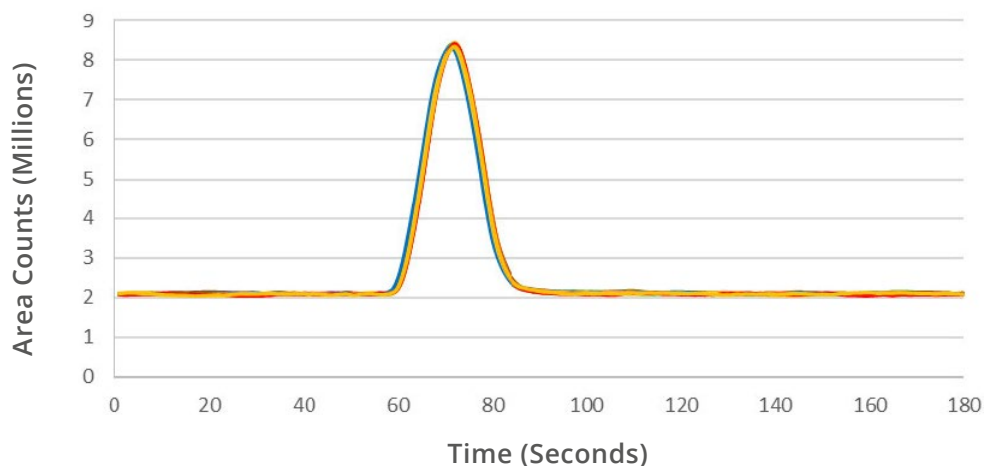
Easy to Use

The LAS-1000 operation is fully integratable with the XT Series and managed directly through the Laboratory User Interface (LUI). The LUI software allows configuration and operation of the autosampler movements while giving users full control over the various analysis options.

* On selected models

6 ppm Total Sulfur in Ultra-Low Sulfur Diesel

Run	1	2	3	4	5	6	7	8	9	10
Result (ppm)	6.03	6.04	6.07	5.99	6.04	5.99	6.03	5.99	6.00	6.02
Average 6.02				SD 0.025				RSD (%) 0.42	

Outstanding Analytical Performance

The table above displays results of a 6.0 ppm/wt. Ultra Low Sulfur Diesel (ULSD) sample acquired with an XTS-1000 combined with the LAS-1000. The 10 run-graph above showcases the analytical performance and high speed of analysis of the XTS-1000/LAS-1000 system.

SPECIFICATIONS

Analytical Performance with XT-2000 Analyzer

Measurement Method: Total Sulfur – Excimer UV Fluorescence (EUVF)
Total Nitrogen – Chemiluminescence

ASTM Methods: Total Sulfur – D5453
Total Nitrogen – D4629

Measurement Range: Total Sulfur – 0-10%*
Total Nitrogen – 0-1%*

Repeatability: Total Sulfur – 30 ppb or 2% whichever is greater
Total Nitrogen – 30 ppb or 2% whichever is greater

Analysis Time: 3 minutes (typical)

Typical Sample Size: 5 to 20 µL

Utility Requirements
Power: 100-240 VAC, 50/60 Hz

Physical Parameters
Dimensions: 533 mm (21.0 in) Wide x 686 mm (27.0 in) Deep x 724 mm (28.5 in) High

Weight: 27 kg (60 lbs)

* Dependent on user application

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