

## Automated Sample Prep/LC System



The Thermo Scientific Prelude S PLC sample preparation and liquid chromatography system was developed to make analysis of target compounds in complex biological matrices routine for clinical research and forensic toxicology laboratories. The Prelude S PLC sample preparation and liquid chromatography system is designed to work seamlessly with Thermo Scientific mass spectrometers such as the Thermo Scientific TSQ Vantage triple-stage quadrupole instrument. The TSQ Vantage system is known for its very high sensitivity and low noise, enabling quantitative analysis and positive identification of drugs, drug metabolites and steroids in biological samples.

The Prelude S PLC system is designed to enhance the cost effectiveness of LC-MS/MS instrumentation by automating sample preparation and increasing mass spectrometer throughput. Automation can minimize variability inherent in manual sample preparation procedures while also reducing sample preparation time and effort. Innovative Thermo Scientific TurboFlow technology is designed to negate problems caused by sample matrix interference while capturing analytes of interest. This level of sample clean-up can enhance MS quantitative analysis by reducing ion suppression. Contamination of the mass spectrometer ion source can also be reduced, minimizing maintenance requirements.

The Prelude S PLC system can contribute to reductions in operating costs for research laboratories that currently outsource LC-MS/MS analysis by bringing this capability in-house. Because it features two channels of high-performance liquid chromatography (HPLC) separation, mass spectrometer idle time can be reduced compared to single channel LC systems. LC-MS/MS performance can be further enhanced through precise and reproducible low-volume gradient operation at flow

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rates of 1-2000 mL/min, which can enable fast, high-resolution separations compared to standard HPLC systems.

**Thermo Fisher Scientific Inc.**, 800-532-4752, [www.thermoscientific.com/prelude](http://www.thermoscientific.com/prelude)  
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