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PRODUCT SPECIFICATIONS

Thermo Scientific™ Prelude MD™ HPLC and
Prelude MD software version 1.0

Confidence in results with ease and efficiency

Intended Use

- The Prelude MD instrument is intended to isolate and separate analytes such as drugs and endogenous compounds from a sample solution and introduce these separated drugs or compounds into a detector.
- It is for *in vitro* diagnostic use.

The Thermo Scientific™ Prelude MD™ HPLC is a medical device for *in vitro* diagnostic use designed to quickly and cost-effectively deliver accurate, reproducible patient test results you can count on day after day. With automated sample cleanup and two channels of HPLC separation, your lab will experience more productivity and certainty in LC-MS test results even when presented with complex sample matrices. Combine the Thermo Scientific™ Endura MD™ mass spectrometer with the Prelude MD HPLC and your laboratory can obtain the quantitative accuracy of LC-MS, easily and confidently.

Hardware features

Thermo Scientific™ TurboFlow™ Technology

Automates sample cleanup tasks by separating sample components from complex sample matrices prior to separation on an HPLC column, greatly reducing error-prone manual steps and variability.

UHPLC (Ultra-high-performance liquid chromatography)

The Prelude MD instrument contains ten pumps that comprise two separate LC channels. Three pumps for each tertiary loading channel that force the solvents through the Thermo Scientific™ TurboFlow™ sample-cleanup columns and two pumps for each binary analytical channel that force solvents through the UHPLC or HPLC columns, and then to the detector. The pumps can

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reach pressures up to 1000 bar (15,500 psi). Each pump operates by using a single-piston syringe, which draws 3 mL of fluid and dispenses it according to the method instructions. The UHPLC syringe pump technology uses less solvents compared to traditional HPLC pumps with reciprocating pistons, saving money and time.

Multi-Channel LC

Two LC channels operate independently synchronized to a single detector. Each HPLC analytical channel uses two pumps to blend and dispense two solvents. This allows for step and gradient solvent changes during each method.

Cross-sequential optimization

Software logic setting that maximizes efficiency by running two LC channels and up to two different LC methods simultaneously using only one detector.

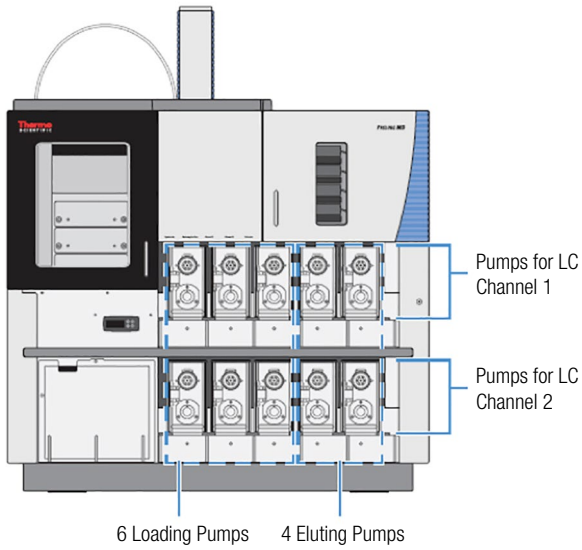

Table 1. Prelude MD specifications

Sample Compartment - 3 drawer temperature controlled (4-40 °C)	
Sample Tray Type	**Capacity**
2 mL vials	54 vials per tray, two trays per drawer, 6 trays total
96-deep-well plates	2 plates per drawer, 6 plates total
Instrument and table dimensions	
Component	**Dimensions**
Instrument (without table)	95.5 × 112 × 73.7 cm (37.6 × 44.1 × 29.0 in.) (w × h × d)
Table	132 × 73.7 × 78.7 cm (52 × 29.0 × 31.0 in.) (w × h × d) Required space between back wall and table = 15.25 cm (6 in.)
Instrument and table	132 × 185.6 × 78.7 cm (52.0 × 73.1 × 31.0 in.) (w × h × d)
Environmental specifications or recommendations	
Environmental condition	**Specification or recommendation**
Location	Indoor use only
Temperature	18–27 °C (64.4–80.6 °F)
Maximum relative humidity	40–80% noncondensing
Column temperature control specifications	
Minimum injection volume	1 µL
Maximum injection volume	100 µL
Recommended sample volume range	10–80 µL
Pump operating specifications	
Specification	**Description**
Maximum operating pressure	1000 bar (15,500 psi)
Minimum programmable flow rate	1 µL/min
Flow rate range	1–10,000 µL/min
Pressure signal accuracy	0.25% of full scale
Residual pulsation	< 1% for flow > 10 µL/min
Flow rate accuracy	0.5% of set point (optimal range)
Gradient composition accuracy	±0.5% of set point (5–95%)
Gradient composition range	0–100%
Electronic specifications	
Specification	**Description**
Communications	LAN and USB
Power	110–250 Vac, ±20%, 50–60 Hz Voltage fluctuation not to exceed ±10% of the nominal voltage

For in vitro diagnostic use.
Not available in all countries.

Find out more at **thermofisher.com/preludeMD**

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