

The Agilent 6230B time-of-flight LC/MS (LC/TOF)



The Agilent 6230B time-of-flight LC/MS (LC/TOF) system allows you to upgrade from nominal mass measurements to a high-resolution accurate mass (HRAM) system for vastly enhanced analytical capabilities. Simultaneous measurement of the full spectrum of mass-to-charge ratios up to 20,000 improves speed and facilitates greater sensitivity. The full mass spectrum scan of a TOF LC/MS ensures that all necessary information is captured to enable screening, identification of unknowns, advanced statistical analysis, and biomolecule characterization.

High resolving power allows for the separation of complex mixtures and aids in the determination of elemental formulae.

The 6230B TOF LC/MS is fully compatible with Agilent Bio-inert HPLC systems making it an ideal tool for intact protein characterization, glycan, and oligonucleotide analysis. The high resolution and accurate mass enable detection and identification of Extractables and Leachables (E&L), and many other impurities and target compounds. Advanced and intuitive software tools like one-click SWARM autotune and WalkUp software allow anyone to routinely achieve reliable results. The 6230B TOF LC/MS MassHunter software suite is compliance ready.

Features Agilent 6230B TOF LC/MS

- Reduce false positives with better than 1 ppm mass accuracy
- Ensure excellent data quality even for fast UHPLC peaks in high-throughput workflows with data acquisition rates up to 44 spectra/second
- Identify compounds based on accurate mass, isotopic abundance, and chemical composition using Find by Formula in MassHunter software
- Analyze monoclonal antibodies (mAb) with high mass accuracy and resolving power for glycoforms and truncation
- Characterize large biologic compounds with a broad mass range of up to 20,000 m/z
- Separate target compounds from interferences with high-resolution data
- Find impurities at extremely low concentrations, using Agilent Jet Stream technology with low picogram on-column sensitivity
- Identify trace-level target compounds in the presence of more abundant matrix compounds with up to five orders of in-spectrum dynamic range
- Reduce administrative tasks and risks while eliminating the need for LC/MS expertise with intuitive MassHunter Walkup software
- Perform untargeted screening with optional fragmentation data using in-source dissociation
- Reduce administrative tasks and risks while eliminating the need for LC/MS expertise with intuitive MassHunter WalkUp software
- Go beyond UHPLC separation with support for capillary electrophoresis, SFC, 2D-LC, and even GC-APCI chromatographic interfaces.
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Specifications Agilent 6230B time-of-flight LC/MS (LC/TOF)

In-spectra Dynamic Range	5 Orders		
MS Acquisition Rate	30 spectra/second		
MS Mass Accuracy (positive)	<1 ppm RMS		
Polarity Switching Duty Cycle	< 1 sec		
Software Platform	MassHunter		
TOF Mass Range	m/z 25-20,000		
TOF Mass Resolution (FWHM)	> 22,000 at m/z 1522 independent of acquisition rate		
Temperature Mass Stability	<2 ppm / 2 °C		
Supported Software Add-Ons	MassHunter WalkUp MassHunter BioConfirm	Mass Profiler Professional	MassHunter VistaFlux
Ion Source	ESI MultiMode (ESI+APCI)	AJS NanoESI	APCI CE-ESI

LC/MS is widely used by the biopharmaceutical industry for therapeutic protein characterization. The accurate mass provided by time-of-flight (TOF) LC/MS allows for confirmation of the synthetic protein, its impurities, and post-translational modifications (PTM). It can also be used for calculation of drug-to-antibody ratios (DAR) for antibody drug conjugates (ADC), relative quantitation, glycoform, and subunit analyses. Coupled to the Infinity III Bio LC, this is a premier system for sensitive, high-resolution analysis of intact proteins.