

MALDI TOF-TOF Mass-spectrometer

General specifications:

A MALDI- TOF/TOF Mass spectrometer capable of operation in Positive and Negative ion modes and MS / MS mode of operation with a collision cell

High repetition stable laser (≥ 2 KHz) with capability to focus to 50 micron diameter.

Solid state Laser with laser Life of $> 10^9$ shots.

Data acquisition speed of 2 KHz in linear and 1 KHz in MS / MS.

Detector: High speed data digitizer (4 GHz and above)

Automatic ion source cleaning.

Linear Mode: Sensitivity for mass 66 kDa : 500 fM with S/N of 20 and above.

Reflectron Mode:

Minimum of upper limit of mass: 12 kDa

Minimum mass resolution: **25,000** for a mass in the range of 1000–3500 Da.

Mass accuracy: Better than 5 ppm

Minimum sensitivity for mass 1000Da: 100 aM with S/N of 50 and above

MS/MS Mode:

Mass range: Lower = 100Da or less; Upper = 6000Da or more

Minimum mass resolution: 5000 or better

Mass accuracy: 50 ppm or less

Minimum sensitivity for mass 1000Da: 200 aM with S/N 20

Mass resolution of precursor ion gate selector: Better than unit resolution

Software for the mass spectrometer:

Suitable high performance PC workstation with greater than or equal to 8GB memory and all interfacing hardware and software for instrument(s) control, data acquisition and data processing. Computer having 64 bit Windows 7 or better operating system with adequate features to transfer the data between other computers. The system should have compatibility for higher version of OS. Complete software for instrument control, data acquisition, and post data processing.

Laser color printer

Software module compatible for multiplexing experiment, data mining, label-free and label-based protein analyses, glycan analysis, and PTM characterization.

MALDI sample plates:

Different types of sample plates that can be used with the instrument: 10 each

Matrices:

Sinapinic acid, α -cyanocinnamic acid, 4-hydroxy-3-methoxycinnamic acid, Picolinic acid etc.,

Standards for regular and microbial tests

Other Conditions:

1. Consumable spares for 3 years with the list of spares and price for every year.
2. Necessary gas cylinder with double stage regulator for collision cell
3. Warranty for 3 years for the entire system should be provided.
4. Only instruments / models introduced in the year 2013 or later will be considered.
5. Supplier needs to give a guarantee that they will supply the new model instrument which is equivalent or better in performance if the quoted model is removed from their product list within a year of release of purchase order.