



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai - 400076

Technical Specifications of TLC Mass Spectrometer
RFx No. 6100001150 (Reference No. 1000026692)

Sr. No.	Technical Specifications for TLC Mass Spectrometer
1	Mass detector
	a. Reaction Monitoring for compound identification and conformity via Direct Injection for crude reaction mixtures.
	b. Should be upgradeable and interfaced with to any make UPLC or HPLC systems.
	c. Standalone system.
	d. Should be able to extract TLC spots automatically to find out the molecular weight.
2	Specifications:
	Ion Source: ESI (Electron Spray Ionization)
3	API: Atmospheric pressure interface & Ionization interface with orthogonal ion sampling from heated capillary-allows for small single Turbo pumps
4	Analyzer: Single Quadrupole analyzer
5	Detector: Electron multiplier with high-energy conversion Dynode.
6	Flow rate range: 10 μ L/ min to 1mL/ min or more
7	Polarity: Positive & negative ion switching in single analysis
8	Polarity switching speed:50 ms.
9	m/z Range: Up to m/z 2000 or better.
10	Acquisition rate: 10,000 m/z units / sec or higher.
11	Resolution :0.5 to 0.7 m/z units (FWHM) at 1000 m/z units /sec over entire acquisition range
12	Sensitivity :10 pg Reserpine (FIA – 5 μ L sample injection volume at 100 μ L/min) 100:1 S/N (RMS) with SIM of m/z609.28
13	Accuracy: +0.1 m/z units over entire acquisition range.
14	Stability: +0.1 m/z units for over 12-hour period.
15	Dynamic range: 4.5 orders of magnitude.
16	Pump for make-up flow (HPLC Pump) & Suitable Vacuum pumps should be supplied.
17	Necessary accessories for smooth functioning of the system must be supplied.
18	Suitable computer and Nitrogen generator should be supplied along with the system.
19	1 year warranty from the date of successful installation.