Technical and price bids are invited for the purchase of a **HPLC Compatible with Bruker Micro ToF-Q-II System** as per minimum specifications, terms and conditions given below.

Minimum Specifications for UHPLC Compatible with existing Bruker Micro ToF-QII System.

An Automatic computer controlled Ultra High Performance liquid chromatography system should be compatible with Bruker LC/MS/MS with a suitable solvent delivery system, Columns compartment, & Data acquisition system software to perform chromatographic operations and control of different modules of HPLC is required.

The UHPLC system must be controlled through Bruker Software (for Bruker MicroToF-Q-II System), It should be able to send the sample directly to Bruker Micro ToF-Q-II for mass analysis of separated fractions. The specifications of Bruker Micro ToF-Q-II are given in Annexure 1.

Binary Gradient Pump with Online Vacuum degasser:
It should provide error-free programming of pump parameters including flow rates.
Operating pressure limits, Compressibility compensation, calibration and diagnostic.

Programmable flow rate range: 0.0 1 to 10 mL/min.
Max. Operating pressure: 15000 psi or more at all flow rates.
Flow precision: 0.08 % RSD or less.
Flow rate accuracy: < *0.5* %
Delay Volume: 800 ul or less.
Automatic piston washing feature
The pump should have GLP features like maintenance feedback for continuous tracking of instrument usage with user settable limits and feedback messages.

Manual Injector

Thermostatic Column Compartment
Temp setting facility: 5 to 80 degrees or more.
Should accommodate 3 or more analytical columns
Temperature accuracy: 0.5 Degrees.
Column identification feature.

Columns: two no. of each C8 and C18 analytical columns

Thermostated Auto sampler:

Injection Volume range: 0.01 **to** 100 uL or m.ore,
Auto sampler carryover: 0.005 % RSD or better.
Sample Delivery precision: <0.3% RSD or better
Standard vial of 2, 4 & 8 mL can be used with the system.
At least 150 samples can be accommodated.
Auto sampler with sample heating/cooling: 4 to 40 Degrees

Chromatography Software

Software should be compatible and run with Bruker MicroTof-Q II System.

Chromatography software should have client/server, 32-bit design for windows 2000 & XP, Professional .Real time triggers to react the condition i.e. To Take action on Fault , Leakage, stop start, wavelength switching, Injection etc.

The software should be GMP/GLP/21CFR compliant with electronic signature etc.

Optional items:

Fraction Collector
Should be programmable to collect fractions of interest.
Capacity: Should hold more than 100 tubes OR 96 well plates.
Flow rates: More than 50 mL/min

Terms & Conditions:

1. The quotations must have validity of at least three months.
2. Quotation must include insurance and air-freight charges, delivery period of the items addresses to The Indian Institute of Technology, Delhi, India(CIF, New Delhi).
3. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated.
4. Detailed Brochures should accompany the offer.
5. If the bidder is an authorized dealer then the authorized Indian dealership certificate from the principles should be enclosed.
6. Warranty details must be given.
7. Payment will be through irrevocable letter of Credit.
8. In case the items are proprietary products of the company, a proprietary item certificate stating the same must be provided.
9. Training should be provided.
10. Institute reserves the right to accept or reject any or all the quotations without assigning reasons thereof.

The technical and price bids should be kept in separate sealed cover marked as “technical” and “price bids” on the top of the envelopes. Both the envelopes should be kept inside a bigger envelope marked as **Bids for HPLC Compatible with Bruker Micro ToF-Q-II System**. The bids should be sent to Prof. S.K.Khare, Chemistry Dept. IIT Delhi, Hauz-Khas, New Delhi-110016 latest by 31 December, 2011, 5.00 PM.

Prof. A. K. Singh (Chairman) **Prof. S.K. Khare**

micrOTOF-Q II:

BDAL #255748

Performance Specifications

Size (B x T x H)	Bench top: 64 x 95 x 132 cm (Footprint)
Weight	160 kg
Vacuum System	5 stages, 28 m^3/h rough pump
Apollo II ion funnel electrospray source	Flow rate: 1 µL/min – 1 mL/min
TOF Mass Range	50 – 20,000 m/z
Quadrupole isolation	Up to 3,000 m/z
Quadrupole Mass Range	Up to 20,000 m/z
Mass accuracy in MS and MS/MS	With internal calibrant: < 2 ppm RMS Error With external calibrant: < 5 ppm RMS Error
Calibration	ONE calibration valid for MS and MS/MS analysis. Calibration is independent from charge state of calibrant mass
Mass resolution	17,500 (FWHM) @ 922 m/z at full sensitivity
Isotopic pattern	The true isotopic pattern is maintained due to TIP™ technology (True Isotopic Pattern) and allows three dimensional chemical characterization of analytes via SmartFormula™3D algorithm using exact mass, TIP, and MS/MS fragment data.
SmartFormula™3D	Enables unambiguous formula determination at "sub-ppm" confidence level up to 1000 Da.
Mass stability & dynamic range	hrEIC (high resolution Extracted Ion Chromatogram) technology with better than 2 mDa stability on centroid data values over an typical LC peak.
Full scan sensitivity in MS	The signal height obtained from a sample consumption of 15 fmol of Myoglobin (16,952 Da) will be better than 200 ion counts on the most intense peak in the charge state envelope. A solution of 100 fmol/µL Myoglobin (in 50/50 acetonitrile/water + 0.1% formic acid) shall be introduced at a flow rate of 3 µL/min.
Full scan sensitivity in MS/MS	The signal height obtained from a consumption of 2.5 fmol of Glu-Fibrinopeptide B will be better than 10O counts on the most intense y' sequence ion from the MS/MS spectrum of the doubly charged precursor ion. This shall correspond to a signal to noise ratio better than 50:1. A solution of 100 fmol/µL Glu-Fibrinopeptide B shall be introduced at a flow rate of 3 µL/min.
TOF repetition rate	Up to 20 kHz
Temperature compensation	Yes
Acquisition rate (2 GHz sampling rate)	20 Hz (profile and peak detected spectra to disk) e.g. 4 MS plus 16 MS/MS spectra per second

Optional accessory

APCI	Flow rate: 100 µL/min – 1.5 mL/min (Optional accessory)
APPI	Optional accessory
Multimode (ESI/APCI)	Optional accessory
On-/Off-Line Nanospray	Optional accessory
CE/MS interface	With grounded needle for easy CE-TOF set-up (Optional accessory)