

## Technical Specifications of Ion Chromatography System

### 1.0 Bidder Eligibility Criteria-I

Sl. No	Bidder Eligibility Criteria-I	Complied / Not Complied	Reference Page No.	Remarks, If any
1	The vendor should have supplied at least two similar instruments in India in the past two years. List of their customers and their contact details should be provided. IIT-Madras shall inquire the bidders' customers about the quality of product/service. If the testimonial from their customers is not satisfactory, IIT-Madras reserves the right to reject the bid based on technical grounds.			
2	Vendor to ensure service support for at least the next 8 years.			

### 2.0 Technical Specifications II

Sl. No	SPECIFICATIONS	Complied / Not Complied	Reference, Page. No.
<b>Pump</b>			
1.	One number of high pressure serial dual piston type pump with selectable flow rate from 0.001 to 20 mL/min. Flow reproducibility should be equal to or better than $\pm 0.1\%$ . The entire system should be gas free to reduce space and running costs.		
2.	Serial dual pistons with two inert check valves.		
3.	Resolution of flow rate : 0.001mL		
4.	Pulsation :Lower than 1%		
5.	Pressure range : 0 – 5000 PSI		
<b>Conductivity Detector</b>			
6.	One conductivity detector for analysis of anion and cation, should be microprocessor based, with a thermostated micro-flow cell conductivity block with an accuracy of $\pm 0.0010$ C. The user should be able to set the temperature of the conductivity block between 20 – 500C.		
7.	Conductivity measurement range 0 – 15000 mS/ cm.		
8.	Electronic noise < 0.1 nS/cm at 1uS/cm level		
9.	Temperature coefficient range 0-5%		
10.	Detector module should have a GLP function to track the working hours.		
<b>Column Housing</b>			
11.	Housing should be able to identify the columns and set the optimal operating conditions for column operations. Should accommodate column of 25 cm.		

<b>IC Columns</b>			
12.	IC columns for analyses of anions and cations should be quoted with respective guard columns. The columns should have an electronic chip to store data and the history of column use. It should also be possible to record the number of injections and the working hours.		
<b>Injector</b>			
13.	One Dual position 6-Port injector valve with fast response time and controlled through software.		
<b>Suppressor</b>			
14.	Suppressor should have high loading and high back pressure (at least 350 psi) with continuous regeneration. The suppressor should be able to take high flow rate of up to 10 mL/min. The regeneration of the suppressor should be by external mode with the possibility of controlling the flow rate of the regenerant. At least 8 years warranty on suppressor should be provided with warranty certificate from the manufacturer.		
<b>Data Work Station</b>			
15.	Software for data acquisition & processing systems along with complete system control should be offered. The necessary software should be fully Windows based. The software should be able to control the system.		
<b>Other Terms and Conditions</b>			
16.	One year instrument warranty		
17.	Not less than 8 years warranty for anion suppressor		
18.	No gas should be required for the entire operation of the system		
19.	Installation and training onsite is required		

(Note: It is mandatory for the bidders to provide the compliance statement in tabular column format along with catalogue page number (comply/not comply) for the Above points with document proof as required. Failing which bidders will be technically disqualified)