

Spectrometer	Product Specification	QTY
Base Unit	Modular system for adaptability/upgradability. System should be chemically inert and flow paths compatible with eluents of pH 0–14. Capable of attaching at least two detectors at a time with full data acquisition. Pre-configured with injectors, columns and detectors for Ultra trace analysis in samples.	01
Analysis Ability	Reagent free system operation for reproducibility and ease of use. Provision for simultaneous detection of cations and anions.	
	Detectable concentration Low to sub µg/L (ppb) level	
	Anion Analysis F^{-1} , Cl^{-1} , Br^{-1} , NO_3^{-1} , NO_2^{-1} , SO_4^{-2} and PO_4^{-3} Testing Application a. Trace anions in high purity water. b. Trace inorganic anions in boric acid treated water. c. Trace anions in power plant waters containing ammonium hydroxide.	
Pumping System	Construction Chemically inert, metal-free PEEK or equivalent pump heads and flow paths compatible with aqueous eluents of pH 0–14 and reversed-phase solvents	02
	Type Dual standard quaternary pump for both applications, microprocessor controlled, constant stroke, variable speed, isokinetic eluent pre-compression.	
	Flow Rate Range 0.01–9.99 mL/min with settable flow increments at 0.01 mL/min, without changing pump heads	
	Flow Accuracy & Precision RSD ≤ 0.1%	
	Flow Repeatability RSD ≤ 0.2%	
	Pressure Range up to 35 MPa (up to 5000 psi)	
	Pressure Pulsation Better than ≤ 1.0% at 2.0 mL/min	
Columns	Degasser Built in quaternary degasser for both pumps	
	Guard columns for anion separating column. Concentrator column for anions. The column thermostat oven range of ambient to +60 °C	01 set
	Temperature Accuracy ± 0.5 °C	
Conductivity Detector CD	Temperature Stability ± 0.2 °C	
	Channel Dual conductivity detector	
	Electronics Type Microprocessor controlled digital signal processing, auto ranging test mode double conductivity detection	01
	Display Range 0.1–15000 µS/cm	
	Auto zero Range Typically upto 10,000 µS/cm	
	Resolution < 0.0045 nS/cm or 0.00238 nS/cm	
	Synchronous Detection Frequency 5 kHz	
	Noise < 0.1 nS/cm	
	Range of temperature 25 °C to 60 °C	
	Temperature Stability < 0.001 °C	
	Precision Temperature Control +0.01 °C	
Sample Injection System	Provision of auto sampler with dual injector for separate injections must be capable of injecting minimum volume (at least 5µL to 50µL). Poly vials for smooth operation for 1 year. Solvent rack with 2 litre 4 bottles.	01
Solvent Degasser	Number of Flow Channels 4 mL/min	
	Maximum Flow Rate 9.99 mL/min	
	Material PEEK, glass filled PTFE, Teflon AF	01
Auto Suppression	Gas Removal > 1 ppm at 1 mL/min	
Eluent Generator	Electrolytic anion suppressor for both channels	
Power Supply	Dual channel eluent generator with built in Degasser and carbonate removal device for RFIC and stock solution as per required application	01
	Power Input 220-240VAC, 50 Hz	
Data Acquisition & Analysis Software	Auto sensing power supply; no manual voltage or frequency adjustment required	
Standards	Control software with validation program, library and self-defect detection system. Customizable data reports, online help wizards and report publisher	
	100 ppm standard solutions of F^{-1} , Cl^{-1} , Br^{-1} , NO_3^{-1} , NO_2^{-1} , SO_4^{-2} and PO_4^{-3}	01 each
Environmental Factors	The unit shall be capable of being stored continuously in ambient temperature in the range of 0 – 60 °C and relative humidity range of 15–90%. The unit shall be capable of operating in ambient temperature in the range of 10–35 °C and relative humidity range of 5–80%.	
Documentation	The original hard copies of user/operational, service manuals and maintenance manual must be supplied in English language. The certificate of calibration/ fitness. List of standard accessories and optional accessories with their part number. Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist.	02
Accessories	Tubing, fittings, valves, gaskets/ O-rings, pressure gauges, power cable and fuses etc. required for smooth operation of the system.	01
	Dual standard quaternary pump maintenance kit	01
	DC compartment maintenance kit	01
	auto sampler maintenance kit	01
	Suppressor, guard and analytical column set	02
Training and Inspection	The supplier must provide training for the users of the instruments at site, after installation and commissioning.	
Warranty	On-site installation, commissioning, training and IQ/OQ (one vendor support) by factory-trained Engineer is required. Comprehensive support for equipment for a period of 12 Months.	
Make and Model	Country of Origin USA, European, UK, Japan, India	
	Make Metrohm, Dionex or equivalent	

Note: Price of each item should be quoted separately (price break up should be given).