



CHHATTISGARH BIOFUEL DEVELOPMENT AUTHORITY

(Department of Energy, Govt. of Chhattisgarh)

छत्तीसगढ़ बायोफ्यूल विकास प्राधिकरण

(ऊर्जा विभाग, छत्तीसगढ़ शासन)



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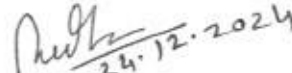
Date: 24.12.2024

ADDENDUM NO. I TO TENDER NO.CBDA/2024/LAB/PT/001

This addendum contains the following:

S.No.	Particular	Corresponding to Tender Page no(s).
1	<u>ANNEXURE – A of SCC</u> <u>Section II</u> <u>Scope of Work (SoW)</u> Page No. 66	Page No. 66 onwards Scope of Work (SoW), of CORRIGENDUM NO. I to TENDER NO. CBDA/2024/LAB/PT/001 dated 19.11.2024 page no. 55-65 will remain same. The subject addendum replaces S. No. 4 IC-1 Ion Chromatograph specifications.

Note: The above information is respect to Tender No. CBDA /2024/LAB/PT/001 uploaded in www.cbda.in as per Scope of Work (SoW) of said tender document.


24.12.2024
Principal Scientific Officer

Scientific and Industrial Research Organisation (SIRO)
(Recognized by Ministry of Science and Technology, Government of India)

वैज्ञानिक और औद्योगिक अनुसंधान संगठन
(विज्ञान और प्रौद्योगिकी मंत्रालय, भारत सरकार से मान्यता प्राप्त)

ADDENDUM NO. I TO TENDER NO.CBDA/2024/LAB/PT/001

ANNEXURE-A of SCC

Section II

SCOPE OF WORK (SoW)

S. No.	Equipment / Activity Code	Particulars of Equipments		Remarks
		Name & Specification*	Details	
4	IC-1	<p>Advanced Ion chromatograph (IC) With specification, compatible for analysis of Inorganic Chloride & Sulfate in fuel Ethanol as per EN 15492 / ASTM D 7319 standard method.</p>		<p>For Ethanol Testing at laboratory Raipur</p>
		<p>The system should be PC based with data acquisition and system control through the same software and software should able to identify pumps, columns, detection automatically. An ion chromatographic system must have inbuilt degassing hardware and column oven</p>		
		<p>(1) Solvent Delivery Pump - Non-metallic PEEK based 0-14 pH & 100% Reverse phase HPLC solvent compatible, isocratic, dual piston reciprocating microprocessor based controlled for-flow range of 0.00 ml/min to 5.00 ml/min in 0.01 increment without changing the pump head. Pressure pulsation/ Ripple: <1% & precision:<0.2% , Flow Accuracy :< 0.2% and Operating pressure: 0-4800 psi or more. The pump must have an inbuilt piston seal wash which can be</p>		

		continuously operated when connected to rinse solution supply. The leak sensor feature must be available as a safety feature for the system.		
		(2) Must have inert, non metallic PEEK (polyether ether ketone) eluent bottles fluidic components throughout the system to ensure solvent compatibility and metal contamination free chromatography.		
		(3) Pump must be capable of running 2 mm and 4 mm i.d. columns without modification of the pump heads. Must have in built		
		<p>(4) Suppression-</p> <ul style="list-style-type: none"> • Suppression devices must be available for Anion applications with membrane base suppressor hardware. • The suppressors must be operated continuously for anion applications with 2mm ID for 0.25ml/min flow of eluent to save the consumption of eluent. • Suppressor regeneration must be carried out in recycle mode to save running cost. • Suppressor device must be able to suppress hydroxide and methane sulfonic acid eluents as required for EPA, ASTM, ISO, or other standardized methods. 		
		<p>(5) Conductivity detector - Microprocessor digital signal processing based with input and output signal rang 0-18000 μS with temperature compensation and temperature range of 7 to 50°C .Must have Cell body of Chemically inert polymeric material and Cell volume<1 μL. Must be compatible with MSA</p>		

		<p>(6) Ion exchange columns should be able to separate high and low concentration analytes in single injection. Anion column and its guard column to compatible for high strength Carbonate / Bicarbonate, hydroxide NaOH/ KOH).</p>		
		<p>(7) Eluent Generation – Eluent generation must be an electrolytic process by which eluent is generated and subsequently purified by means of electrolysis. The eluent concentration must be varied by changing the applied current which allows Isocratic and gradients formations without the use of extra pumps, fittings, or valves. The electrolytically generated gradient can be infinitely variable throughout a single run.</p> <ul style="list-style-type: none"> • Eluent generation must be electrolytic just by providing D.I. Water and integrated into the system, must have capability to generate Carbonate and Bicarbonate eluent electrolytically. • Gradient supported must be an unlimited number of; linear, convex, concave, or inverse gradients profiles. • Concentration range from 0.1 to 100 mM with a flow rate from 0.1-3.000 mL/min. 		
		<p>(8) The software must be able to provide full automatic control of the process of analyzing samples. This must include acquiring data, quantitation, producing a report, and the options to upgrade to an incorporated excel like spreadsheet for report flexibility. The software must be able to automate integration updates without time consuming batch reprocessing of</p>		

		changes to integration in a data set. The software must have the ability to customize the report format and content. It should have virtual IC column library for future method development purpose		
		(9) Vendor should provide PM kit, require accessories tubing , ferrule certified qualification along with Anion and Cation standards		
		(10) Auto sampler: Automated sample for loading of samples having a capacity of 50 Polyvials of 5ml or 0.5 ml vial size. With minimum of 250 numbers of vial should be quoted with the system. a) Must utilize non-metallic fluid path components to reduce potential sources of contamination, eliminate corrosion, and be acid and base resistant. b) All auto samplers' vials should be in closed cover of sampler to avoid environmental and light, dust effect.		
		(11) Should provide suitable PC and UPS along with system.		

NOTE:

***The Specification of advanced Ion chromatograph (IC) will be considered for evaluation of Tender No.CBDA/2024/LAB/PT/001**

1. The cost of delivery of the specified equipments above, shall be at CBDA Laboratory, Biofuel Complex site at Raipur, Dist. Raipur and Vill: Godhi, Dist: Durg, shall include all manpower, transportation costs, tools and tackles, loading & unloading at the point of transfer of ownership.
2. SoW includes rate of material (basis rate + GST/other taxes, as applicable, all inclusive), creation of item as per specification in table 1 above including labour, transport, watch & ward is part of the Tender.