

Amendment No. 01

Sub: Amendment to the referred tender enquiry

Ref.: Tender Enquiry Document no. HITES/DTL/BADDI-02/2022-23 dated: 22-07-2022

Following changes are being incorporated in the tender:

Section – VII
Technical Specifications

For:

Schedule No. 2

High-Performance Liquid Chromatograph Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto Sampler	
1. <u>PUMP</u>	
Quaternary gradient with online degasser Should have pressure operating range minimum 9000 psi or better	
Flow:	0.01 to 10 ml/min.
Flow Precision	0.1% RSD or below
Flow Rate Accuracy	±1%
Eluent Degassing	Online membrane Degasser for all channels
Gradient Mixer	Quaternary mixing & gradient capability using high speed proportionate valve
Solvent Setting Range	4 solvents setting range: 0-100% with 0.1% step
DIAGNOSTIC FEATURES	Error detection and display, Leak detection & safe leak handling
2. <u>DETECTORS</u>	

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High-Performance Liquid Chromatograph Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto Sampler	
MULTI WAVELENGTH UV-VIS	Simultaneous Multi wavelength
	Measurement at minimum two points.
Wave length Range	190-700 nm
Wave length Accuracy	±1 nm
Wave length Repeatability	0.1 nm
Drift	1 x 10 ⁻⁴ AU/h
Noise Level	0.25 x 10 ⁻⁴ AU or lesser
Light Source	D2 / Tungsten /Halide
Lamp Hour	D2 lamp >2000 hr lifetime
3. THERMOSTATED COLUMN COMPARTMENT WITH COOLING FACILITY	
WORKABLE TEMPERATURE RANGE	10 to 80 Degree C or better
For column length	300 mm
No of Columns accommodated	Minimum 2
Temperature Stability	±0.1 °C of set temperature
Cooling system	Peltier based or equivalent technology
4. AUTOSAMPLER	
Injection Mode	Total vol. Inj / Variable Inj method
Injection Volume Range	0.1-100µl (Standard)
Replicate Injection	per vial 1-30
Sample Capacity	100x 1.5ml/2 ml vials or more

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High-Performance Liquid Chromatograph Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto Sampler	
Injection Volume Accuracy	±1%
Cross contamination	<0.1% with & without automated needle wash
Carry over	< 0.1% from previous injection
Tray Temperature Operating Range	10° C below ambient to 40 ° C or better
Temperature Accuracy	±0.5 °C
4. HPLC columns and accessories required:	
Columns C-18 column and C-8 Columns: compatible size	
C8 = 250 X 4.6 X 5µm = 2	
C8 = 150 X 4.6 X 5µm = 2	
C18 = 250 X 4.6 X 5µm = 5	
C18 = 150 X 4.6 X 5µm = 2	
Cyano = 150 X 4.6 X 5µm = 1	
Amino = 250 X 4.6 X 5µm = 2	
Phenyl = 250 X 4.6 X 5µm = 2	
Silica = 250 X 4.6 X 5µm = 1	
Accessories	
Vials with septa (2ml): 100 nos	
Ferrules : 100 nos	
Frits: 50 nos	
SOFTWARE WITH P.C. AND PRINTER	

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High-Performance Liquid Chromatograph Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto Sampler
Suitable software 21 CFR PART II compliance**, Laser Printer and computer with i7 processor, 4GB RAM 1 TB Hard disk, 21" monitor to be supplied.
Suitable online UPS with surge protector with 01 hr back up should support both the instrument and computer. The UPS battery should be covered during both warranty and CMC periods.
The system should be compatible with 3rd party LIMS software
Professional printer with scanner and photocopy facility – 2 nos (for all 15 nos HPLC machines)
DOCUMENTSAND TRAININGS:
IQ - OQ and PQ documents
All consumable parts should covered except columns and vials during warranty and CMC period.
On site Calibration with traceable reference material, to be done by the supplier on installation and there after every six months during warranty and CMC period.
On Site Successful Training at the time of installation.
OTHER CONDITIONS
· The system quoted should be of latest model and the spares and services should be available for next 10 years.
· All the consumables parts should be covered during warranty and CMC period.
· Suitable UPS with 01 hour backup and surge protector should be supplied with the system.
**Capable of controlling through single software for all HPLCs on a single network with capability of, on line reporting and user level management.
Added Para: The quoted model must be available on manufacturer's website

Read As:

SN	HPLC Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto sampler
	Technical specification:
1	PUMP
	Quaternary gradient with online degasser Should have pressure operating range minimum 9000psi or better
	Flow: 0.2 -10 ml/min.
	Flow Precision:0.1% RSD or below
	Flow Rate Accuracy : ±1%
	Eluent Degassing: Online membrane Degasser for all channels
	Gradient Mixer: Quaternary mixing & gradient capability using high speed proportionate valve
	Solvent Setting Range: 4 solvents setting range:0-100% with 0.1% step
	DIAGNOSTIC FEATURES: Error detection and display, Leak detection & safe leak handling
2	DETECTORS
a	PDA
	Wave length Range: 190-700 nm
	Diode Element: minimum 512
	Wave length Accuracy: ±1 nm
	Wave length Precision: ± 0.1 nm
	Noise: 0.6 x 10 ⁻⁵ AU
	Drift: 5 x 10 ⁻⁴ AU/h
	Temperature Operating Range: 5° C below ambient temp to 50°C
	Deleted
	Path length: 10 mm (standard Analytical cell)
	Cell Volume: Approximately 10 µL
	Light source: D2 and Tungsten lamp
	Lamp Hour: D2 lamp >2000 hr lifetime
b	RI DETECTOR
	Refractive Index Range: 1.00 to 1.75 RIU
	Noise Level: ± 1.5 x 10 ⁻⁹ RIU
	Drift: 1 x 10 ⁻⁷ RIU/hr

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SN	HPLC Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto sampler
	Cell Volume: Approximately 10 µL
	Temperature Control: Temp controlled Flow cell unit
	Temperature Operating Range: 5° below ambient to 50°C.
	Temperature Accuracy: ±0.5 °C
c	FLUORESCENCE DETECTOR
	Light Source: Xe lamp with standard wattage
	Wavelength Range : 200-900 nm
	Wavelength Accuracy : ± 2 nm
	Wavelength Reproducibility : ±0.2 nm
	Excitation Wavelength : 200 nm to 700 nm
	Emission Wavelength : 280 nm 900 nm
	Wavelength Scanning: Scanning of Excitation and Emission wavelengths
	Flow Cell volume: approximately 10 µl
	Pressure : 2Mpa
	Sensitivity: 500:1 (Tangent method) 700:1 (Base line method)
	Temperature Operating Range: 5° C below ambient to 50 ° C
	Temperature Accuracy: ±0.5 °C
3	THERMOSTATED COLUMN COMPARTMENT WITH COOLING FACILITY
	WORKABLE TEMPERATURE RANGE: 10 to 80 Degree C
	For column length: 300 mm
	No of Columns accommodated: Minimum 2
	Temperature Stability: ±0.1 °C of set temperature
	Cooling system Peltier based or equivalent technology
4	AUTOSAMPLER
	Injection Mode: Total vol. Inj / Variable Inj method
	Injection Volume Range: 0.1-100µl (Standard)
	Replicate Injection: per vial 1-50
	Sample Capacity: 100x 2 ml vials or more
	Injection Volume Accuracy: ±1%

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SN	HPLC Quaternary Gradient with PDA,RI & Fluorescence Detector with Auto sampler
	Cross contamination: <0.1% with & without automated needle wash
	Carry over: < 0.1% from previous injection
	Tray Temperature Operating Range: 10° C below ambient to 50 ° C
	Temperature Accuracy: ±0.5 °C
	Peltier based cooling system or better
5	HPLC columns and accessories required
	Columns C-18 column and C-8 Columns : compatible size
	C8 = 250 X 4.6 X 5µm = 2 (BDS)
	C8 = 150 X 4.6 X 5µm = 2 (BDS)
	C18 = 250 X 4.6 X 5µm = 2 (BDS)
	C18 = 150 X 4.6 X 5µm = 2 (BDS)
	Diol = 150 X 4.6 X 5µm = 1
	Xetera = 250 X 4.6 X 5µm = 2
	Tri methyl siloxane (TMS) = 250 X 4.6 X 5µm = 1
	Divenyl Benzene= 250 X 4.6 X 5µm = 1
	Chiral Column = 250 X 4.6 X 5µm = 1
	Accessories
	Vials with septa (2ml) : 100 nos
	Ferrules: 100 nos
	Frits : 50 nos
	SOFTWARE WITH P.C. AND PRINTER
	Suitable software 21 CFR PART II compliance, Laser Printer and computer as per General Specification
	DOCUMENTS AND TRAININGS
	IQ - OQ and PQ documents
	All consumable parts should covered except columns and vials during warranty and CMC period.
	On site Calibration with traceable reference material, to be done by the supplier on installation and there after every six months during warranty and CMC period.
	On Site Training at the time of installation.
	OTHER CONDITIONS
	The system quoted should be of latest model and the spares and services should be available for next 10 years.
	All the consumables parts should be covered except cuvettes during warranty and CMC period.
	Suitable UPS with 01 hour backup and surge protector should be supplied with the system.
	Added Para: The quoted model must be available on manufacturer's website

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Note: A tenderer requiring any clarification or elucidation on the above mentioned amended specification may take up the same with the purchaser in writing in their letter head duly signed and scanned through email to pcd@hllhites.com and bmenoida@hllhites.com. The purchaser will respond to such request provided the same is received by the purchaser within two days of issuing of this amendment i.e. on or before 03.08.2022.

Any queries/representations received later shall not be taken into cognizance.

Note:

- i.** All other contents of the tender enquiry including terms & conditions remain unaltered.
- ii.** Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids.