## SUPPLEMENTAL/BID BULLETIN

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## ADDENDUM 2019-03

## SUPPLY, DELIVERY, AND INSTALLATION OF VARIOUS SCIENTIFIC EQUIPMENT FOR THE DOST TUKLAS LUNAS ETP PROJECT

17 May 2019

This Addendum No. 2019-03 is issued to modify specifications in the attached Bid Documents and Bill of Quantities for the Project. This shall form an integral part of the Bid Documents.

	Specifications				
	Original		Revised		
Lot 1					
20L Rotary evaporator w/	A.20L explosion proof rotary evaporator: specifications		A.20L explosion proof rotary evaporator: specifications		
vacuum pump	Rotary Bottle	20L (flange φ95)	Rotary Bottle	20L (flange φ95)	
and cooler	Collecting Bottle Condenser	10L (flange $φ$ 60) Vertical three backflow, φ130*680mm(main), φ160*530mm(SUB)	Collecting Bottle Condenser	10L (flange φ60) Vertical three backflow, φ130*680mm(main), φ160*530mm(SUB)	
	Charging Valve Rotating Speed Vacuum	34#(standard size) 0-110 rpm -0.098 Mpa	Charging Valve Rotating Speed Vacuum	34#(standard size) 0-110 rpm -0.098 Mpa	
	Temperature control range	0-400°C	Temperature control range	0-400°C	
	Temperature control accuracy	±1°C	Temperature control accuracy	±1℃	

Rotating power	120 W	Rotating power	120 W	
Heating power	5 KW	Heating power	5 KW	
Power supply	220/50 V/Hz	Power supply External size(W*D*H)	220/50 V/Hz	
External size(W*D*H)	External size(W*D*H) 1100*600*2100 mm		1100*600*2100 mm	
Standard Accessory	20Lrotary bottle*2, 10Lcollecting Bottle*2 Explosion-proof transducer, Explosion-proof motor EX120W	Standard Accessory	20Lrotary bottle or flask*2, 10Lcollecting Bottle*2 Explosion-proof transducer, Explosion-proof motor EX120W	
B.Vertical Circulating	B.Vertical Circulating Water Vacuum Pump: Specifications		B.Vertical Circulating Water Vacuum Pump: Specifications	
Flow Rate (L/min)	Approx. 80	Flow Rate (L/min)	Approx. 80	
Lift (m)	Approx. 12	Lift (m)	Approx. 12	
Power (W)	Approx. 370	Power (W)	Approx. 370	
Single end sucking rate (L/min)	Approx. 10	Single end sucking rate (L/min)	Approx. 10	
Water storage tank volum	ne(L) Approx. 50	Water storage tank volume(L)	Approx. 50	
Vacuum Degree (Mpa)	-0.098 or better	Vacuum Degree (Mpa)	-0.098 or better	
Voltage/Frequency (V/Hz)	) 220/50	Voltage/Frequency (V/Hz)	220/50	
C.Recirculating Chiller	: Specifications		C.Recirculating Chiller: Specifications	
Temperature Control Ran	-	Temperature Control Ra nge	Not lower than 5°C	
Temperature Control	PID	Temperature Control	PID	
Temperature Stability	±0.3°C	Temperature Stability	±0.3°C	
Temperature Sensor	PT100	Temperature Sensor	PT100	
Display Resolution	0.1°C	Display Resolution	0.1°C	
Pump Flow Rate	20L/min	Pump Flow Rate	20L/min	
Cooling Capacity	1.2Kw	Cooling Capacity	1.2Kw	
Refrigerant	R134a	Refrigerant	R134a	
Pump Capacity Pressure	0~1.5bar	Pump Capacity Pressure	0~1.5bar	
Filling Volume Liters	Min. 8L	Filling Volume Liters	Min. 8L	
Power Supply	AC220V±10%, 50Hz	Power Supply	AC220V±10%, 50Hz	

Lot 2				
Flash	A.Flash Chromatography System: Specifications		A.Flash Chromatography System: Specifications	
chromatography	Solvent delivery	Two constant volume (3 mL) electric	Solvent delivery	Two constant volume (3 mL) electric pumps
system with		HPFC pumps		
dvanced	Flow rate	1–200 mL/min	Flow rate	1–200 mL/min
olvent	Pressure limit	145 psi (10 bar)	Pressure limit	145 psi (10 bar)
evaporation set	Sample Interval	Milligrams–75 grams	Detector	PDA
ip	uV Detection	variable wavelength (200–400 nm)	uV Detection	variable wavelength (200–400 nm)
·۲	Flow cell path length	<mark>0.3 mm</mark>		
	uV collection modes	Single/dual/λ-All wavelengths (variable UV and UV-VIS)	uV collection modes	Single/dual/λ-All wavelengths (variable UV and UV-VIS)
	Fractionation modes	Volume, threshold, threshold with volume, low slope, medium slope, custom slope or via external detection	Fractionation modes	Volume, threshold, threshold with volume, low slope, medium slope, custom slope or via external detection
	Collection vessels	Test tubes (13 mm, 16 mm, 18 mm, and 25 mm) and bottles (120 mL, 240 mL, and 480 mL)	Collection vessels	At least 100 test tubes each with rack (13 mm 16 mm, 18 mm, and 25 mm) And at least 2 bottles each (100-150 mL, 200- 250mL, and 350-500 mL)
	Power	100–240 VAC, 50/60 Hz, 4.0 A	Power	100–240 VAC, 50/60 Hz, 4.0 A
	System Control & Data	On-board computer with 10.4" touch	System Control & Data	On-board computer with touch screen
	management	screen interface	management	interface
	Dimensions	355 mm (14") x 596 mm (23.5") x 497 mm (19.6") add 178		
		Compatible C18 silica flash cartridges of		Compatible C18 silica flash cartridges of at least one (1) of each: 10g, 20g and 120g
	INCLUDES the FOLLOWING:	at least one (1) of each: 10g, 20g and 120g <mark>(or of similar sizes) four (4) pcs</mark> Collecting Rack for test tubes	INCLUDES the FOLLOWING:	Initial Solvent Set: 2 4L of Methanol and LCGrade Water
				With test kit and user acceptance training for personnel
	B.Advance Solvent Evaporation Set-up: Specifications		B.Advance Solvent Evaporation Set-up: Specifications	
	Solvent Compatibility	Boiling points from 30 °C to 160 °C (up to 205 °C with an external vacuum pump).	Solvent Compatibility	Boiling points from 30 °C to 160 °C (up to 205 °C with an external vacuum pump).
	Heating	20 °C to 70 °C	Heating Control	20 °C to 70 °C
	Rotational Speed	3000 to 8000 rpm	Rotational Speed	3000 to 8000 rpm

Condense	r 25 °C. Auto and manual		Condenser	Refrigerated condenser temperature: Not higher than -25 °C. Automated and manual draining; and manual defrost.
Vacuum	and level. Ir mbar. Optio	ntrol method: Variable speed nternal vacuum Pump: 4 onally an external vacuum oe connected using a KF-16 nge.	Vacuum	Pressure control method: Variable speed and level. Internal vacuum Pump: 4 mbar. Optionally an external vacuum pump can be connected using a KF-16 vacuum flange.
Vial Size (	30 mL scint 20 mL Scint Compatibility 16 mL vial 8 mL Vial 4 mL (3 var	illation vial illation vial	Vial Size Compatibility	30 mL scintillation vial 20 mL scintillation vial 16 mL vial 8 mL Vial 4 mL (3 variants)
Solvent R	eclamation Up to 98% typical cond	of solvent vapors under litions	Solvent Reclamation	Up to 98% of solvent vapors under typical conditions
Exhaust	Double trap	ping	Exhaust	Double trapping
Electrical	Supply 220–240 V~	, 50 and 60 Hz, 10 A	Electrical Supply	220–240 V~, 50 and 60 Hz, 10 A
			With test kit and user acceptance training for personnel	

For your guidance and information of all concerned.

(Sgd)Prof. Jessica K. Cariño Chair, Bids and Award Committee

Received by the Bidder: \_\_\_\_\_\_ Date: \_\_\_\_\_