### College of Agriculture, Vellayani, Thiruvananthapuram

#### IBC/5/2018/939

22.2.2018

#### From

Course Director B.Sc.-M.Sc. (Integrated) Biotechnology Course

### То

Dean College of Agriculture, Vellayani

Sir,

Sub: B.Sc.- M.Sc. (Integrated) Biotechnology course –Installation of Modular Lab facility-Corrigendum in the Tender- reg.
 Ref: No.GL/A1/11072/2017 dated 16.2.2018 of Dean

As per the ref. cited, a tender notice was given in the University Website inviting tenders for the supply and installation of modular lab facility at Integrated Biotechnology Block. A pre bid meeting was held on 21.2.2018. Based on the queries raised by the bidders, a few modifications have been made in the specifications given in the tender notice. The corrigendum is attached herewith. It is requested that necessary action may be taken to publish it in the University website (web@kau.in) at the earliest.

Yours faithfully,

## Corrigendum in the Tender Notice No. No.GL/A1/11072/2017 Dated 16/02/2018 for the Installation of Modular Lab Facility at Integrated Biotechnology Block, College of Agriculture, Vellayani, Thiruvananthapuram, Kerala, India 695522

No.

# Modular Lab Facility in Lab1

S1.	Technical Specification	Modification
No.		
2	C Frame system-Worktops should be supported by	C Frame system-Worktops should be supported
	heavy duty steel frame work. The frame shall be of	by heavy duty steel frame work. The frame shall
	rectangular box with a wall thickness of 12guage, de	be of rectangular box, de greased and powder
	greased and powder coated for smooth finish and	coated for smooth finish and protection. The
	protection. The dimension details of frame work as	dimension of frame work
	follows.	
	Vertical member of minimum 60x40mm.	Vertical member of minimum 60x40mm.
	Horizontal top member 50x40mm.	
	Horizontal bottom member 80x40mm.	
3	Worktop	Worktop should be made of Jet Black granite of
	Worktop should be made of Jet Black granite of	minimum 18 mm thickness. The exposed edges
	minimum $18(\pm 1)$ mm thickness. The exposed edges	should be round molded. All worktops shall be
	should be round molded. All worktops shall be with	with 80mm backsplash on walls of same
	80mm backsplash on walls of same thickness.	thickness.
4.	Cabinet Under work bench	Cabinet Under work bench
	Should be fabricated of 18 gauge CRCA sheet. Base	Should be fabricated of 18 gauge CRCA sheet.
	should be welded together with neat, professional	Base should be welded together with neat,
	MIG weld fillets. For maximum strength, fillets	professional MIG weld fillets. Fixed Shelves
	should be left ungrounded. Fixed Shelves shall be	shall be constructed of 18 gauge steel, with
	constructed of 18 gauge steel, with channels formed	channels formed on four sides. Cabinet body &
	on four sides. Cabinet body & shelves are pre-treated	shelves are pre-treated with an iron phosphate
	with an iron phosphate multi-stage process that	multi-stage process that includes a final sealer
	includes a final sealer and de ionized water rinse. All	and de ionized water rinse. All exposed surfaces
	exposed surfaces are electro statically coated with a	coated with a thermosetting laboratory grade
	thermosetting laboratory grade powder coating	powder coating
	Two cabinets on each side of the work bench. On	Two cabinets on each side of the work bench. On
	either side one with 4 drawers (at least	either side one with 4 drawers (at least
	50cmX50cmX15cm each) and the other with one	50cmX50cmX15cm each) and the other with one
	drawer and one cabinet with adjustable shelves (at	(at least 50cmy 50cmy 50cm)
	least 50cmx50cmx50cm)	

7.	Hinges:	Hinges:
	Nickel coated heavy duty, rust free, self-closing, and	Nickel/S.S coated heavy duty, rust free, self-
	allowing opening up to 165 degree and should be	closing, and allowing opening up to 165 degree
	adjustable in all three directions for perfect finish and	and should be adjustable in all three directions
	corrections.	for perfect finish and corrections.
	Drawer slides should be made of metal, epoxy coated	Drawer slides should be made of metal, epoxy
	and with nylon wheels to allow smooth and silent	coated and with nylon wheels to allow smooth
	sliding.	and silent sliding.
8.	Electrical sockets	Electrical sockets
	4 Nos on either side. Standard Electrical	4 Nos on either side. Standard Electrical
	Fittings/wires should be provided with flame	Fittings/wires should be provided with flame
	retardant, UV stabilized, unbreakable polycarbonate	retardant, UV stabilized, unbreakable
	casing. Connector should be of phosphor bronze to	polycarbonate casing. Connector should be of
	provide high conductivity, flexibility and contact	phosphor bronze to provide high conductivity,
	pressure. Switches shall be of Piano type. Standard	flexibility and contact pressure. Switches shall be
	supply 5/15 Amp-220 Volt double electrical sockets	of Piano type. Standard supply 5/15 Amp-220
	should fully conform to IS -1293 -1988	Volt double electrical sockets. All the electrical
		accessories should be brand new with ISI mark.
9.	Reagent rack	Reagent rack
	Stainless steel 316 two tier rack with service box	Stainless steel two tier rack with service box
	300mm wide, 2700mm long with the required S.S.	300mm wide, 2700mm long with the required
	vertical section for strength, stability& rigidity. The	S.S. vertical section for strength, stability&
	profile ends shall be covered and protected with	rigidity. The profile ends shall be covered and
	injection moulded ABS end caps. The reagent rack	protected with injection moulded ABS end caps.
	shall be made of injection moulded ABS material.	The reagent rack should be made of injection
	Vertical section should have groove for knock down	moulded ABS material. Vertical section should
	assembly of service box and adjustable shelves.	have groove for knock down assembly of service
	Shelves shall be adjustable at any required height	box and adjustable shelves. Shelves shall be
	with friction technology without any holes. The	adjustable at any required height. The Shelves
	Shelves bracket should be made of minimum 16	bracket should be made of minimum 16 gauge
	gauge thick. 6mm thick wire glass/toughened glass	thick. 6mm thick wire glass/toughened glass shall
	shall be provided on each shelf. Refer the sketch	be provided on each shelf. Refer the sketch
	provided.	provided. The grade of the S.S. should be
		mentioned.

# Modular Lab Facility in Lab2

S1.	Technical Specification	Modification
No.		
2.	C Frame system-Worktops should be supported	C Frame system-Worktops should be
	by heavy duty steel frame work. The frame shall	supported by heavy duty steel frame work. The
	be of rectangular box with a wall thickness of	frame shall be of rectangular box, de greased

3.	12guage, de greased and powder coated for smooth finish and protection. The dimension details of frame work as follows. Vertical member of minimum $60x40mm$ . Horizontal top member $50x40mm$ . Horizontal bottom member $80x40mm$ . Worktop Worktop Worktop should be made of Jet Black granite of minimum $18(\pm 1)$ mm thickness . The exposed edges shall be round molded. All worktops shall be with 80mm backsplash on walls of same thickness.	<ul> <li>and powder coated for smooth finish and protection. The dimension details of frame work as follows.</li> <li>Vertical member of minimum 60x40mm.</li> <li>Worktop should be made of Jet Black granite of minimum 18 mm thickness . The exposed edges shall be round molded. All worktops shall be with 80mm backsplash on walls of same thickness.</li> </ul>
4.	Cabinet under work bench Should be fabricated of 18 gauge CRCA sheet. Base should be welded together with neat, professional MIG weld fillets. For maximum strength, fillets should be left ungrounded. Fixed Shelves shall be constructed of 18 gauge steel, with channels formed on four sides. Cabinet body & shelves are pre-treated with an iron phosphate multi-stage process that includes a final sealer and de ionized water rinse. All exposed surfaces are electro statically coated with a thermosetting laboratory grade powder coating. Three cabinets on each side of the work table. On either side one with 4 drawers (at least 50cmX50cmX15cm each) and the other with one drawer and one cabinet with adjustable shelves (at least 50cmx50cmx50cm)	Cabinet under work bench Should be fabricated of 18 gauge CRCA sheet. Base should be welded together with neat, professional MIG weld fillets. Fixed Shelves shall be constructed of 18 gauge steel, with channels formed on four sides. Cabinet body & shelves should be pre-treated with an iron phosphate multi-stage process that includes a final sealer and de ionized water rinse. All exposed surfaces are coated with a thermosetting laboratory grade powder coating Three cabinets on each side of the work table. On either side one with 4 drawers (at least 50cmX50cmX15cm each) and the other with one drawer and one cabinet with adjustable shelves (at least 50cmx50cmx50cm)
7.	Hinges: Nickel coated heavy duty, rust free, self-closing, and allowing opening up to 165 degree and should be adjustable in all three directions for perfect finish and corrections. Drawer slides should be made of metal, epoxy coated and with nylon wheels to allow smooth and silent sliding.	Hinges: Nickel coated /S.S. heavy duty, rust free, self- closing, and allowing opening up to 165 degree and should be adjustable in all three directions for perfect finish and corrections. Drawer slides should be made of metal, epoxy coated and with nylon wheels to allow smooth and silent sliding.

8.	Electrical sockets	Electrical sockets
	5 Nos on either side. Standard Electrical	5 Nos on either side. Standard Electrical
	Fittings/wires should be provided with flame	Fittings/wires should be provided with flame
	retardant, UV stabilized, unbreakable	retardant, UV stabilized, unbreakable
	polycarbonate casing. Connector should be of	polycarbonate casing. Connector should be of
	phosphor bronze to provide high conductivity,	phosphor bronze to provide high conductivity,
	flexibility and contact pressure. Switches shall be	flexibility and contact pressure. Switches
	of Piano type. Standard supply 5/15 Amp-220	should be of Piano type. Standard supply 5/15
	Volt double electrical sockets should fully	Amp-220 Volt double electrical sockets. All
	conform to IS -1293 -1988	electrical accessories should be brand new
		with ISI mark.
9.	Reagent rack	Reagent rack
	Stainless steel 316 two tier rack with service box	Stainless steel two tier rack with service box
	300mm wide, 3800mm long with the required	300mm wide, 3800mm long with the required
	S.S. vertical section for strength, stability&	S.S. vertical section for strength, stability&
	rigidity. The profile ends shall be covered and	rigidity. The profile ends shall be covered and
	protected with injection moulded ABS end caps.	protected with injection moulded ABS end
	The reagent rack shall be made of injection	caps. The reagent rack shall be made of
	moulded ABS material. Vertical section should	injection moulded ABS material. Vertical
	have groove for knock down assembly of service	section should have groove for knock down
	box and adjustable shelves. Shelves shall be	assembly of service box and adjustable
	adjustable at any required height with friction	shelves. Shelves shall be adjustable at any
	technology without any holes. The Shelves	required height. The Shelves bracket should be
	bracket should be made of minimum 16 gauge	made of minimum 16 gauge thick. 6mm thick
	thick. 6mm thick wire glass/toughened glass shall	wire glass/toughened glass shall be provided
	be provided on each shelf. Refer the sketch	on each shelf. Refer the sketch provided. The
	provided.	grade of S.S. should be mentioned.

S1.	Required Technical Specification	Modification
No.		
1.	The Fume cupboards should be installed and	The C-Framed Fume cupboards should be
	commissioned as per ASHRAE 110 – 1995.	installed and commissioned as per ASHRAE
		110 – 1995.
15.	The Cabinet should be provided with 4 nos. of	The Cabinet should be provided with 4 nos. of
	chemical resistant leveling jack with PVC caps.	chemical resistant leveling jack

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