

BOQ for Chemical and Forestry Equipments for FY 2023-2024

SL. No	Particulars	Specification	Unit	Price	Remarks
1	Acetone	2.5lit			
2	Bromophenol blue 0.04% indicator solution	125ml			
4	Tween 20	500ml			
5	Hexane Reagent	CH ₂ (CH ₂) ₄ CH ₃			
6	Gram Staining kit	4set			
7	hydrogen Peroxide	5 liter			
8	Iodine Solution	250ml			
9	Methyl red Indicator	125ml			
10	Sodium Hydroxide	NaOH			
13	Formaldehyde solution	5liter			
14	Petroleum Ether (60-80)	2.5lit			
15	Potassuim Iodide	100gm			
16	Sodium sulphate	500gm			
17	Silver Nitrate	25g			
18	Sulphuric Acid	2.5			
19	Nitric acid	2.5			
20	immersion oil	500ml			
21	Plate Count Agar	500gm			
22	Sodium Metabisulphite (Food graded)	500gm			
23	Oxalic Acid	500gm			
24	Boric acid	500gm			
25	Bromine Water	500ml			
26	Bromocresol green indicator	125ml			
27	Chloroform	500ml			
28	Ninhydrin	250ml			
29	Acetic Acid Glacial 99-100%	500ml			
30	Benedicts Reagent	500ml			
31	Bials's Reagent	500ml			
32	Glycerine	500ml			
33	Mercuric Nitrate Extrapure	100gm			
34	Methyl orange solution	100ml			
35	Millons Reagent	500ml			
36	Molish's Reagent	500ml			
37	Ninhydrin extrapure AR	100gm			
38	SeliwanOff's Reagent	500ml			
39	Sudan IV Solution	500ml			
40	Diammonium Hydrogen phosphate(food grade)	500gm			

41	Potassium pyrosulfite(food Grade)	500gm			
42	Yeasts (Sachromyces cerevisiae)	500gm			
43	Citric acid (food grade)	500gm			
44	Pectin (food grade)	500gm			
21	pH 211 General Cleaning Solution	HANA (HI 7061L)			
22	pH 211 Protein cleaning Solution,	HANA (HI 7073L)			
23	pH Inorganic Cleaning Solution	HANA(HI 7074L)			
24	pH Oil & Fat Cleaning Solution	HANA(HI 7077L)			
25	pH Calibration Solution	pH 4.01 buffer solution HI 7004L			
26	pH Calibration Solution	pH 7.01 buffer solution HI 7007L			
27	pH electrode storage solution	storage solution HI70300L			
28	pH Meter (Cleaning agent)	Horiba(Cleaning agent including protein-cuting enzyme model 220)			
29	pH meter(Liquid junction	Electrode cleaner (model 220)			
40	Ethanol (Alcohol)	100% (AR graded)			
41	Ethyl Acetate				
42	Giberellin plant hormone (GA3)	ACS graded			
43	Caesin	ACS graded			
44	Gelatin	Biochemistry			
45	amphoterecin B	tissue culture graded			
46	Phenanthroline				
47	Hydroxylamine Hydrochloride				
48	Ammonium Sulphate				
49	Sodium Acetate				
50	Potassium nitrate				
51	Glacial acetic acid				
52	pH buffer tablet	9			

53	pH buffer tablet	4			
54	pH buffer tablet	7			
56	Butyl Alcohol	ACS, AR			
57	Chitin Agar medium	microbiology			
58	Potassium ferrocyanide	ACS, AR			
59	Fiolin ciocalteau reagent	ACS, AR			
59	Dragendroff's reagent	ACS, AR			
60	carboxymethylcellulose (CMC) broth	microbiology			
61	Glucose	ACS			
62	tyrosine	ACS			
63	Hydrochloric acid	ACS,AR			
64	Methanol	ACS,AR			
65	Acetone	ACS,AR			
66	Ammonium hydroxide	ACS, AR			
67	Muscovite (Mica powder)	ACS, AR			
68	pelargonidin 3-glucoside	ACS, AR			
69	Mannitol salt agar	microbiology graded			
70	Nutrient agar	microbiology graded			
71	Agar agar	microbiology graded			
72	Potato dextrose agar	microbiology graded			
73	peptone bacteriological	microbiology graded			
74	ammonium acetate				
75	DNA extraction kit (blood and tissues)	Qiagen, Invitrogen, promega or any other approved company			
76	DNA extraction kit (blood and tissues)	Qiagen, Invitrogen, promega or any other approved company			
77	DNA extraction kit (plant)	Qiagen, Invitrogen, promega or any other approved company			
78	PCR purification kit	promega			

79	DNA ladder	invitrogen			
80	Gel loading dye	invitrogen			
81	16s rRNA primer (Forward and reverse) -PCR	thermofischer scientific, qiagen, eurofins, sigma			
82	TAE Buffer (Tris-acetate-EDTA) (50X)	thermofischer scientific, qiagen, eurofins, sigma			
83	Proteinase K	thermofischer scientific, qiagen, eurofins, sigma			
84	Triton X-100	thermofischer scientific, qiagen, eurofins, sigma			
85	EDTA	thermofischer scientific, qiagen, eurofins, sigma			
86	Paraformaldehyde (PFA)	thermofischer scientific, qiagen, eurofins, sigma			
87	Sodium borohydride	thermofischer scientific, qiagen, eurofins, sigma			
88	Glycine	thermofischer scientific, qiagen, eurofins, sigma			
89	SDS	thermofischer scientific, qiagen, eurofins, sigma			

List of Glass ware and Equipment

1	Mini Rotary Shakers	Model:Rs-18 Plus (dimension 320*613*155mm) (speed range 50-250rpm)			
2	Extraction thimbles, cellulose whatman	40 x 80mm			
3	Extraction thimbles, cellulose whatman	25x80 mm			
4	Stackable Deep Lab Storage Tray	Dimensions (L x W x H): 13.8 x 21.25 x 4.5 inch, 16 Liter, HDPE made			

5	Volumetric Flask	capacity 100ml			
6	Clear Plastic Transfer Pipet Pasteur Pipettes Droppers	50 Pieces 5ml			
7	Whatman filter paper	No 42			
8	cover slips				
9	Hand lens	Magnification: 20x Power			
10	Bottle Top Dispenser	2-10ml (without Recirculation)			
11	Bottle Top Dispenser	10-50ml (without Recirculation)			
12	Bottle Top Dispenser	1-5ml (without Recirculation)			
13	Aluminum foil	72meter			
14	Match Box				
15	kitchen towel	Cloth Pices			
16	Test Tube Brushes	white bristle, cotton tip			
17	Laboratory Coat (men fitted)	Polycotton materials, Lower patch Pockets, Centre back Vent for ease of movement height (105cm)			
18	Magnetic stirrer bead	45mm, 8mm			
19	Thermometers mercury free	10 to 100			
20	Drying Rack for Lab Glassware Rack 52 Pegs	Drying Rack Wall- Mount Free- Standing Detachable PegsSize: 70 X 55.3 X 12.7cm / 27.5 X 21.8 X 5"; Built-in molded draining tray, with hole in the tray for drainage, supplied with 30 inch (760mm)			

21	Hot Air Oven	(Memmert) 110 (internal dimensions 108 litres, 560 x 480 x 400 mm)			
22	Hot and Cold water Dispenser	Drinking			
23	Acid Storage Cabinet				
24	Suction Tube Cleaning Brush	length 6"/45pices			
25	Cotton Roll				
26	Lithium Cell	CR2032			
27	Lithium Cell	LR 44/AG13			
28	Hand Wash Soap	Lifeboy			
29	Disk Wash Soap				
30	Alkaline/Duracell/Panasonic	batteries(9V)			
31	Alkaline/Duracell/Panasonic	AAA			
32	Alkaline/Duracell/Panasonic	AA			
33	Hand glove	Large			
34	LPG Cylinder				
35	Gas Pipe and Regulator	Pipe 200 cm			
36	Muffle Furnace	Model PF 1, Chamber Size(mm) H= 140,W= 190,D=560. External Size (mm) H=595, W=490, D= 830, Vol (liter) 140			
37	Autoclave, Class B, Benchtop Type, STB-BZ Series	1. Automatic door switch,2. Chamber volume: 45L,3. Design temperature: 139 °C, Design Pressure: 0.25Mpa, Pulsating Vacuum, Multiple test function, Build in steam generator			
38	Polyethylene Bottle Aspirator	20 liter			
39	Polyethylene Bottle Aspirator	10liter			
40	Crucible Tongs	stainless steel, Length 500mm			

41	Stainless Steel tray	10"L x 7"W x 3"H			
42	Clevenger Oil Extraction Apparatus	1000ml			
43	Heating Mantle	1000ML (220 Volt)			
44	Mini Titrator for Measuring Titratable Acidity in Fruit Juice	SKU: HI84532-02			
45	Kitchen Food Thermometer Digital Probe Oven & Meat Thermometer Timer for BBQ Grill Meat Food Cooking Temperature Gauge	Range from 0-100			
46	Pcs Electronic Digital Foods Thermometer For Cake Candy Fry BBQ Food Meat Temperature Household Thermometers with Long Probe	Range from 0-100			
47	PRECISION BALANCES	(0.01g to 1200g)			
48	Mopping stick with bucket				
49	10M Translucent Silicone Tubing	4Mm X 1.5Mm (Bore X Wall)			
50	Spray bottle	500ml			
51	Electric kettle	2.3L Travel Kettle Electric Kettle Stainless Steel Cordless Portable Heating Electric Water Boiler			
52	Green, Red & Yellow Biomedical Garbage Bags	Color: Green, Red & Yellow (Size: Medium)			
		Usage/Application: Bio Medical Waste Collection			
		Material: Plastic			
53	separatory funnel				
54	Horizontal clean bench with UV, Labconco	PCR workstation			
55	Colorimeter	s			

56	Elemental Analyzer (Supply and installation)	CHONS (Carbon, hydrogen, oxygen, nitrogen and sulfur)			
57	Atomic absorption spectrophotometer with all accessories (perkin elmer)(Supply and installation)	Lead, Copper, Mercury, Zinc, Cadmium, arsenic, iron, strontium, Chromium, Magnesium, Sodium, Calcium			
58	Gas chromatography mass spectroscopy (supply and installation)	agilent			
59	HPLC - UV, DAD, RI (Supply and installation)	agilent			
60	ultra deep freezer (-80 degree celsius)				
61	ultra deep freezer (-20 degree celsius)				
62	refrigerator (4 degree)				
63	sweep net				
64	mortar and pestle	with outer dia. 20 cm at top rim			
65	Sodium Dodecyl Sulphate-Polyacrylamide Gel Electrophoresis system	thermo fisher scientific			
66	Brookfield CT3 Texture Analyzer	Brookfield Engineering Laboratories, Inc., USA)			

67	Vertical Laboratory Autoclave LVA-J10	Capacity 35 L Sterilization Temperature 115 to 129 °C Sterilization Pressure 0.165 MPa Chamber Dimension ($\Phi \times D$) 280 \times 500 mm Timer Range 0 - 80 min Number of sterilizing baskets 2 Heat Average $\leq \pm$ 1			
68	Laboratory spray dryer (Mini) (Supply and installation)	Buchi			
69	Freeze dryer (supply and installation)	FreeZone 2.5 Liter - 50C Benchtop Freeze Dryers, labconco			
70	Freeze dryer (supply and installation)	FreeZone 2.5 Liter - 84C Benchtop Freeze Dryers, Labconco			
71	MILLEX® SYRINGE FILTERS	sigma aldrich			
72	WHATMAN® SYRINGE FILTERS	sigma aldrich			
73	Goldfish Fat Extractor	LABCONCO/BIO EVOPEAK			
74	VWR® mySPEC, Micro- Volume Spectrophotometers	VWR			
75	Lab Scale Fermentors and Bioreactors, Jupiter Single & Parallel Autoclavable Fermentors and Bioreactors (supply and installation)	Solaris			

76	Elara Flat Photobioreactors (Supply and installation)	Solaris			
77	Seed Germinator Chamber	igenels			
78	crucible for fiber (40-100 micrometer)				
79	Chimneys for laboratory (Exhaust vent, Chimney with fan and Catalytic converter with fan)	Nabertherm GmbH			
80	Hartek Lab single screw extruder (Supply and installation)	Model; HTES-30 , dimension(mm)- 1460*1115*1660			
81	Lab twin screw extrusion line (Supply and installation)	Hartek Technologies Co.,Ltd.			
82	Electric Oil Press (supply and installation)	Electric Oil Press, Stainless Steel Kitchen Oil Maker, Cold Hot Press 40- 240°C Temperature Adjustable, Automatic Organic Oil Extractor, Intelligent Seed Oil Mill for Commercial Home Use			
83	Milkoscan/ milk analyzer	Brand Ekomilk, Temperature (oC) 5-50%, protein 2- 7%, lactose 0.1-6%			
84	Micropipette- 1ML	eppendorf			
85	Micropipette- 0.1 ml	eppendorf			
86	Microbiological Incubators	(Thermo Scientific,Herather m IGS180)			
87	walk in freezer (-20)	(-20 °C, RW Smith,14' 1.5X10' 5X9 '4.625)			

88	Walk-in Refrigerator	(4°C, RW Smith, 14' 1.5X10' 5X9 '4.625)			
89	Automatic Steel Autoclave LB-14ASA,	Capacity 100 L Sterilization room size Φ 450 × 650 mm Exterior dimensions 600 × 600 × 1360 mm Temperature range 134 °C Timer 0 ~ 9999 mins Maximum pressure 0.22 Mpa Power 6 KW Voltage 220 V; 50 Hz Weight 120 kgs			
90	Digital Colony Counter	LX12CC			
91	7500 Fast & 7500 Real-Time PCR System (Supply and installation)	Applied biosystem			
92	3D food printer	Brand: Foodbot S2 Multi Ingredient Food. -Print size: 150mm*150mm*73mm -Print Speed: 15-70mm/s -Nozzle diameter: 0.3 - 1.5mm -No. of extruder: single -Machine weight: 15kg -Machine diameter: 420mm*381mm*400mm			

93	Differential Scanning Calorimetry (DSC) (supply)	Coleparmer			
94	Laboratory centrifuge with 3 types of rotor	Labconco 7810010 CentriVap® Centrifugal Vacuum Concentrator, Acrylic Lid; 115 VAC, 50/60 Hz			
95	ColorFlex EZ Spectrophotometer	Hunter lab			
96	Thermo Gravimetric Analyzer (Supply and installation)	Mettler Toledo TGA2 Thermogravimetric Analyzer with Small Furnace, XP1 Balance, and TGA Sensor			
97	Vacuum Heat Sealing Machine and installation	Vacuum Heat Sealing Machine, Model Name/Number: Dzq 500 2d			
98	Tensile testing machine	WDW 200kN computerized universal tensile testing machine			
99	Refrigerated/Heated Circulating Bath, 120VAC	PolyScience 9612A11C 28.4-liter Programmable Digital Controller, Refrigerated/Heated Circulating Bath, 120VAC			
100	Edible Film forming trays or frame	18 inches by 12 inches (45.7 cm by 30.5 cm),			

101	Carbon Coated Steel Baking Tray Bread Loaf Mould Pan Cake Mould (Non Stick Black 25 Cm)	Carbon Coated Steel Baking Tray Bread Loaf Mould Pan Cake Mould (Non Stick Black 25 Cm)			
102	New Brunswick BioFlo 115 Benchtop Fermentor & Bioreactor and installation	New Brunswick BioFlo 115 Benchtop Fermentor & Bioreactor,ioFlo/CelliGen 115			
103	Digital pH- Meter	Seven Compact S210			
104	modified packaging equipment	MODEL KB450/1S			
105	Agarose gel electrophoresis system	thermofisher scientific or VMR			
111	Nuclease-free, deionized water	500ml/bottle			
112	Micro Pippette	10 µl			
113	Micro Pippette	20 µl			
114	Micro Pippette	50 µl			
115	Micro Pippette	100 µl			
116	Micro Pippette	200 µl			
117	Micro Pippette	1000 µl			
118	Sterile filter tips,10 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
119	Sterile filter tips,20 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
120	Sterile filter tips,50 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
121	Sterile filter tips,100 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
122	Sterile filter tips,200 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
123	Sterile filter tips,1000 µl (Rnase, Dnase & Pyrogen free)	10 box/ cartoon			
124	Centifuge Tube 15 ML.	25 Pieces/ Pkt			

125	Sterile Gloves(Nitrile medical gloves)- blue colour- powder free (S)				
126	sterile uricol container(50ml)	50/pkt			
127	MicroAmp Fast 96-Well Reaction Plate without barcode (0.1ml), applied Biosystem Cat. 4346907	(10 pieces/pkt)			
128	MicroAmp 8-Tube strip (0.1ml), applied Biosystem Cat. 4358293	(300 pieces/pkt)			
129	MicroAmp Optical 8 cap strip, Applied Biosystems: Cat. 4323032	(300/ pkt)			
130	MicroAmp Optical Adhesive film, Applied Biosystems: Cat. 4311971	100/pkt			
131	Sterile pasteur Pippete, 3 ML	500/pkt			
132	Flame photometer (supply and instalation)	Flame Photometer - Automatic Unit Without Dilution FP8600			
133	Multi channel micropipette	5 to 50 microliter			
134	Tweezers				

Forestry Equipemtns

L No.	Specification	Unit	Price	Remarks
1	Clinical Gloves	50 pairs	Box	
2	Surgical gloves	Size 6.5, 7, 7.5	box	
3	Povidone Iodine	1% 100 ml	bottles	
4	Savlon (Chlorhexidine)	1 litre	bottles	
5	fur/hair clipper	battery based		
6	Super sensitive veterinary gloves (AI sleeve)	50 pairs	box	
7	Vicryl suture material	size 1 -0, 2-0	box	
8	Syringe	2 ml, 5 ml, 10 ml, 20ml		
9	caustic paste/caustic potash	500 gm	bottle	
10	Ekman Grab sampler / Ekman Sediment sampler	225 cm ² - sample volume up to 5 L,	box, made of AISI 316 stainless steel, weights 5-6 kg	

11	Plankton net	Mesh size 50–500 micro meter, length 1.5–2.5	net mesh (cone shaped equipment)		
12	Ethanol	Emsure (ACS,ISO0 Ethonal absolute for analysis			
13	Formalin	100%			
14	Acetone				
15	Student tent (trekking)	4 ment tent	Numbers		
16	measuring tapes	50 m	Numbers		
17	Binocular	Professional (Wide angle binocular series with XD lenses)	numbers		
18	Fireline rakes	Regular fireline rakes	numbers		
19	pickaxe	Regular pickaxe	numbers		
20	GPS (etrex)	Garmin	numbers		
21	Hypsometer	Nikkon forestry pro	numbers		
22	Sharmen traps for small mammal	Sharmen traps for small mammal	numbers		
23	Clinometer	Suunto PM-5/360 PC clinometer	numbers		
24	Compass	Suunto KB-14 sighting global compass	numbers		
25	Tandem Global compass/clinometer	Tandem Global compass/clinometer	numbers		
26	Glass Jar	Same size as pickel jar	numbers		

Note: The rate quoted must be inclusive of transportation charge till college
The goods must be delivered within 30 days from the date of the issuance of supply order

Name, seal and signature
of bidder on every page of
the BoQ