

**TENDER / BIDDING DOCUMENTS FOR THE PURCHASE OF**

**Lab Equipments, Glassware and Chemicals  
For the Department of Pharmacy, Botany & Zoology, Institute  
of Biotechnology & Microbiology**



**BACHA KHAN UNIVERSITY CHARSAZZA**

**January, 2023**

**Firm Name:** \_\_\_\_\_

*Hajmali*  
**Director P&D  
Bacha Khan University  
Charsadda**

**TENDER DOCUMENTS FOR THE PURCHASE OF LAB EQUIPMENTS, CHEMICALS, GLASSWARES FOR THE DEPARTMENT OF PHARMACY, BOTANY & ZOOLOGY, INSTITUTE OF BIOTECHNOLOGY & MICROBIOLOGY**

**1. General Instructions**

- i. Any tender without earnest money will not be accepted.
- ii. Conditional/incomplete/overwritten bid will not be accepted.
- iii. Any bidder interested in bidding for one or more items separately is allowed to do so. However, preference will be given to bidder offering several items together.
- iv. The prices quoted must be valid for at least 90 days from the date of tender opening.
- v. Telephonic / telexed / faxed / telegraphic quotations will not be entertained.
- vi. The bid must accompany the following:
  - Firm registration Certificate with the Federal/Provincial Government
  - National Tax Number
  - Sales Tax Registration Certificate Number.
  - Certificate to the effect that they never been blacklisted by any Government / Semi. Government Organization.
  - Previous tender /any other organization need to submit with satisfactory report

**2. SCOPE OF SUPPLY**

The bidder shall supply the items as per specifications given in the attached Annexed.

**3. BID PRICE**

The bidder shall indicate in his offer, list of items with prescribed specifications, the unit prices and total bid prices of the goods. Taxes levied by the Government, if any, shall be recoverable from the bidder as per rules.

**4. CURRENCY OF BID**

The tender supplying indigenous goods or imported goods shall quote only in Pakistani Rupees. If the quoted in foreign currency, the same will be converted into Pakistan currency at the average exchange rate RBI on the date of opening of Tender.

**5. VALIDITY OF BID**

The bid shall remain valid for acceptance of the purchase for a period of 90 days (Ninety days) after the date of opening of bids.

  
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**6. EARNEST MONEY**

The bidders shall furnish, as part of his bid, earnest money equal to 2% of the quoted price with their offer in form of CDR (Call deposit) in favour of Treasurer, Bacha Khan University Charsadda, issued by a Pakistani scheduled Bank or branch of a Foreign Bank operating in Pakistan. The CDR (Call deposit) shall be returned to the unsuccessful bidders on their written request as early as possible. The earnest money will be forfeited if a bidder shows his inability for supply of the items due to any reason for which order has been placed on him.

**7. SIGNING OF BIDS**

The successful bidder signing the bid shall initially sign all the pages of the bid documents.

**8. DEADLINE FOR SUBMISSION OF BIDS**

All bids must reach and be received by the University on or before the prescribed deadline which will be opened on the same day in the University committee room in the presence of bidders or their representative.

**9. LATE BIDS**

Any bid which is received after the specified date and time for receipt of tenders will be treated as "late" tender will be ignored or/and shall be returned unopened to the bidders.

**10. VARIATION IN SCOPE OF WORK**

The university shall have the power to order variation in the form, quality or quantity of the items or any part thereof and shall have the power to order the contractor/supplier to do so and the contractor/supplier shall comply with such orders including the following:

- a) Increase or decrease/ removal in the quality/quantity or scope of any work included in the contract.
- b) Omit any such work
- c) Execute additional work necessary for completion

**11. CANVASSING**

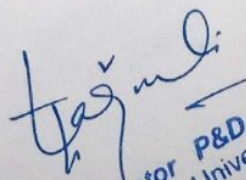
Unsolicited advice / clarifications and any personal approaches at any stage of evaluations of bids are strictly prohibited and may lead to disqualification.

**12. DELIVERY PERIOD**

Delivery period for supply of items would be as per work/supply order. A penalty may be charged by the university after expiry of the delivery.

**13. PRICE**

The price of the items will be inclusive of transportation and other relevant taxes etc. No separate payment will be made by the University on this account & firm bound to deliver in the Procurement office of BKUC.

  
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#### 14. **GUARANTEE/WARRANTY**

The Successful bidder has to warrant that the Goods supplied under this contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier shall furnish one-year guarantee for all the above-mentioned items. In case of defect in any item the supplier shall replace it free of cost; otherwise the supplier will return the entire paid amount to Bacha Khan University Charsadda immediately.

The offered warranty includes:

- (a). visits to the user institution at frequencies as part of preventive maintenance.
- (b). Quality Assurance tests (if applicable).
- (c). The equipment which requires quality assurance test shall be done free of cost immediately after installation, during the period of comprehensive warranty.
- (d). Maximum time to attend any repair call should be within 1 week.
- (e). The costs of labour for all repairs and shall require for replacement during repairs of all kinds of accessories, probes, all types of Equipment's wherever applicable and also the accessories & other devices supplied along with the equipment like stabilizer, UPS, Computer, etc, which from part of equipment system, without which it cannot perform satisfactory.
- (f). The installed software should be the latest one for the particular model and future software updates should be provided free of cost during the Warranty period.

#### 15. **TAXES**

All government taxes shall be deducted at source according to the relevant rules.

#### 16. **TECHNICAL SPECIFICATIONS**

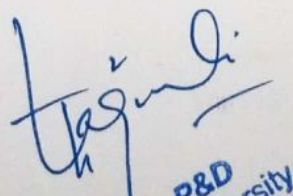
The university shall have the power to order at any time, the removing of any item or work executed which is not in accordance with the contract / technical specification. In case of default by the contractor to carry out such orders, the university shall have the power to have such items removed and re-executed through other arrangements at the sole risk, cost and responsibility of the contractor/supplier.

#### 17. **COMPLETION TIME**

The delivery of the items/stores shall be completed within the prescribed period and time and shall be considered as the essence of contract. In case of default on the part of the contractor to complete damages for the delay shall be imposed.

#### 18. **INSPECTION OF ITEMS**

All items shall be subject to inspection and shall be approved by Competent Authority, before the same are installed in position. The Competent Authority may reject such materials/stores/items as are considered by him substandard.

  
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**19. RESPONSIBILITY AGAINST DAMAGES**

Before and up to the whole of the items are handed over to the university and a proper completion certificate/supplier thereof obtained by the contractor/supplier, the contractor shall be responsible for all or any damage caused to the items through accident, improper handling, transport or any other cause and shall be replaced by the Contractor up to the full satisfaction of Competent Authority.

**20. MODE OF PAYMENT**

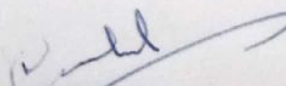
- a. No advance payment will be made as per Government rules.
- b. 90% payment of the contract price shall be paid on receipt of goods in good condition, and it will be made to supplier after inspection of the supplied items by the respective department or technical committee constituted by the university if found in order in all respects after the successful and complete supply, installation and functioning of the items.
- c. Balance 10% would be kept as performance guarantee for one year.

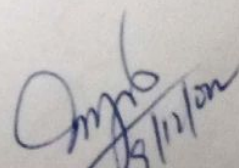
  
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Pharmacy ✓

## Pharmacology Lab Equipment's List

S.NO	Name	Specifications	Quantity
1	Haemometer set	Pipette = 20micro Litres Black Counting Chamber, Round HB Tube, 20 ul H.B. Pipette, Cleaning Brush, Glass Dropper, Glass rod, Amber Bottle	05
2	Tissue organ Bath	Chamber Capacities = 10 ml, Height = 126 mm, Internal diameter = 11 mm Coil Capacity = 180 ml Temperature Range = Room temperature +3 °C to 50 °C (protection); Resolution 0.1 °C Power Supply = 220 v	05
3	Kymograph	Drum dimensions = Height: 150mm Diameter: 150mm Height of rod = 275x 330x 440mm Power Requirements = 220/230V AC 50Hz	05
4	Digital balance	Readability = 1mg - 200g & 1g - 500g Pan size = 90 mm, Dimension = 230*393*350mm	01
5	E.S.R stand	Capacity = 6 tubes	05
6	Western Green Tubes		10
7	Oven	Capacity = 50 Liters, Maximum Temperature = 300 °C	01
8	Barometer	Digital	02
9	Hot plates	Temperature = Up to 300°C Heating plate surface = Stainless Steel 304 Thermostatic controller, 220 Volts 50Hz Plate dimensions = 250 x 300 mm / 10*12 inch	02
10	Spiro meter (Plastic body)		05
11	pH Meter	Measuring range = 0-14pH Dimensions = 170 (L) x 85 (W) x 30 (H) mm	02
12	Digital + Mercury Thermometers	Measuring range: 35°C - 42°C or 96°F - 108°F	10
13	Dissection box		05
14	First Aid Box		01
15	Snellens Chart (eye)		01

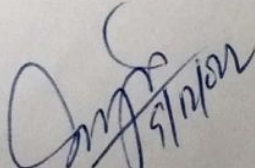
  
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 19/11/2020

## Equipment's List for Pharmacognosy Lab


S.No	Equipment Name	Quantity	Specification
1	Centrifuge Machine	1	<p><b>Speed regulation range for centrifuge tubes: 100-3000 rpm (1610 × g)</b></p> <p>Overall dimensions (W×D×H): 420 x 495 x 235 mm</p> <p>Weight: 11.8 kg</p> <p>Nominal operating voltage: 230 V, 50/60 Hz or 120 V,</p> <p>Power consumption (230V / 120 V): 110 W (0.5 A) / 120 W (1 A)</p>
2	Compound Microscope	3	<p><b>Microscope compound</b></p> <ul style="list-style-type: none"> <li>• Magnification: upto 40X-400X</li> <li>• Mobility: Desktop with left-right movement upto 70 mm or more</li> <li>• Optical Head: Inclined Optical head, symmetrical eye distance adjustment (55-75 mm, desirable)</li> </ul> <p>Objective Revolver, Quadruple (desireanle)</p>
4	Water bath 4 holes	3	<ul style="list-style-type: none"> <li>• Range: Minimum RT-100°C</li> <li>• Fluctuation: ± 0.5°C</li> <li>• Material Stainless steel <ul style="list-style-type: none"> <li>○ Four holes</li> </ul> </li> </ul>
5	Rota Evaporator + Chiller	1	<ul style="list-style-type: none"> <li>• Motor Type: Brushless DC</li> <li>• Speed Range: 20-200rpm</li> <li>• Display: LED (speed, temperature,time)</li> <li>• Clockwise and Anti-clockwise: Yes</li> <li>• Heating Temperature Range Room temp. to 180 c</li> <li>• Heating Power :1200 W</li> <li>• Timer:Yes</li> <li>• USB Interface Yes</li> <li>• Voltage/Frequency 100-120/200 240 V</li> </ul>
6	Aspirator	1	<ul style="list-style-type: none"> <li>• Supply pressure: 50psig</li> <li>• Free Airflow: 30 LPM +/- 15%</li> <li>• Operating Temperature Range: -18°C to 50°C (0°F to 122°F)</li> <li>• Aspirator 300 mmHg</li> <li>• Vacuum: +/- 10%</li> </ul>
7	Ultraviolet Lamp	1	<ul style="list-style-type: none"> <li>• Two UV tubes for illumination (1 × UV 254 nm and 1 × UV 366 nm, each 8W)</li> <li>• Convenient handling through one button operation for each UV tube</li> <li>• Homogeneous illumination</li> </ul>

  
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			<ul style="list-style-type: none"><li>• Improved user safety through tilt sensor and timer (automatic switch-off after 10 min)</li></ul> Two types of UV light are required for inspecting thin-layer chromatograms:
8	Water Distillation Plants (Electric)	1	<ul style="list-style-type: none"><li>• Main body: Mild steel</li><li>• Glass: Borosilicate</li><li>• Heater load: 1 KW each</li><li>• Heater material: ceramic with spiral element</li><li>• Heater tube: Quartz/Silica gel</li><li>• Single distillation unit output: 1.5/hr</li><li>• Electric supply: 220/230v ac</li><li>• Finish: powder coated</li></ul>

  
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GLASS WARES PHARMACOGNOSY LAB

S.No	Item	Qty.
1.	TLC plates	5packs
2.	TLC chamber and sprayer	3
3.	Funnels	10
4.	Gloves	2packs
5.	Iron stand clamp	10
6.	Pestle & mortar	10
7.	Beaker50ml	10
8.	Beaker100ml	10
9.	Beaker250ml	10
10.	Beaker500ml	10
11.	Beaker1000ml	10
12.	Petri dish (4 inch)	20
13.	Wall thermometer	1
14.	Glass vials	20
15.	Titration flask (50ml)	10
16.	Titration flask (100ml)	10
17.	Titration flask (250 ml)	10
18.	Heating mantle	2
19.	Thermometer (100 C)	5
20.	Thermometer ( 110 C)	5
21.	Thermometer (360C)	5
22.	Capillary tube	3 packs
23.	Tripod Stand	10
24.	Spirit lamp	5
25.	Wire gauze	10
26.	Iodine flask (250 ml)	5

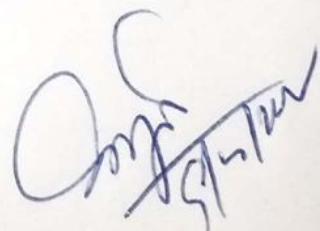
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*Asst. Prof.*  
 Asst. Prof.

S.No.	Chemicals	Quantity
1	Hydrochloric acid	2.5L
2	Potassium Mercuric Iodide (Mayer's reagent)	1 bottle
3	Potassium Bismuth Iodide (Dragendorff's reagent)	1 bottle
4	Ferric Chloride	500gm
5	Glacial Acetic Acid	2.5L
6	Papaver Somniferum Fruits (dried)	200gm
7	Acacia fruits	200gm
8	Glycyrrhiza Glabra Dried Stem	200gm
9	Garlic dried rhizome	500gm
10	Ginger dried rhizome	500gm
11	Aloe vera exudate	250ml
12	Clove	100gm
13	Cinnamon	200gm
14	Fennel	200gm
15	Spearmint	200gm
16	Turmeric	500gm
17	Chloroform	1L
18	Cod liver oil	0.5L



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19	Calamine	250gm
20	Cinnamon oil	0.5L
21	Castor oil	500ml
22	Caraway oil	0.5L
23	Ethanol	2.5 L
24	Gelatin	0.5kg
25	Litmus paper blue	5packs
26	Litmus paper red	5packs
27	Menthol	2.5L
28	Naphthalene	500gms
29	Olive oil	0.5 L
30	Phenolphthalein	500gm
31	Paraffin hard	0.5 kg
32	Rose oil	0.5L
33	Universal pH paper	5packs
34	Silica gel	1 kg


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Glass Wares List of Pharmacology Lab

S.No.	Name of Itmes	Quantity
1	Test tubes	50
2	Test tubes stands Plastic (24Hole)	10
3	EDTA tubes	100
4	Glass petri plates 4 inch diameter	20
5	Glass Pipette 5 ml	10
6	Glass pipettes 10 ml	10
7	Tripod stands	15
8	Spirit lamps	15
9	Test tube holders	25
10	Cotton rolls	10
11	Sterile cotton swabs (100 Pcs)	100



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Chemicals List of Pharmacology Lab

S.No	Name of itmes	Quantity
1	Adernaline hydrochloride	1
2	Atrophine	1
3	Homatropine	1
4	Pilocarpine	1
5	Acetyl Choline	1
6	Barium Chloride	1
7	EDTA	1
8	NACl2	1
9	KCL	1
10	Mgcl2	1
11	CaCl2	1
12	KH2PO4	1

  
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List of Equipment required for Department of Zoology

S.No.	Equipment	Specification	Quantity
1.	Biosafety Cabinet	Class II Biosafety cabinet	01
2.	Micro pipettes Set	1224V50 Mfr. No. 3123000900 Also known as: PE-31209 Description Research Plus 3 Pack (0.5-10 µL, 10-100 µL, 100-1,000 µL)+ 3 reusable epT.I.P.S.® boxes with 96 pipette tips each	1 set
3.	Horizontal Nucleic Acid Electrophoresis Systems	XinDNA Multipurpose Horizontal Electrophoresis Cell	01
4.	Stereo Microscope	Galilean Optical System Total Magnification 2.1x-690x*1 Binocular/Trinocular/Tilting Trinocular Observation Tube Extendable Eyepoint Adjuster	1
5.	Micro wave oven	Homage Microwave Oven HDG 201 S - 20 Litres - Defrost Function	1
6.	Gel Documentation system	Gel Doc System - GenoSens 2000 Touch Series	1
7.	Glass wares	Slides, petri dishes, Flasks, Glass jars, EDTA and Gel added tubes, Eppen dorf etc	Slides, petri dishes= 500 each Flasks and beakers=15 each EDTA and Gel tubes: 5 packs Glass jars=100

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Assistant Professor  
Department of Botany  
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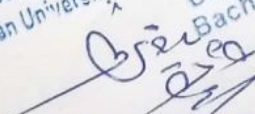
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			Glass jars=100 Eppendorf=1 pack of 1000
8.	Dissecting box	Stainless steel, consisting of 20 instruments for accurate dissection. Supplied in zipper leather case. Kit consists of: Scissors - 2 pcs. Forceps - 2 pcs. Needles - 4 pcs. Scalpel - 1 pc. B.P. Handle w/ Blade - 1 pc. Razor - 1 pc. Ruler 6" - 1 pc. Magnifying...	10
9.	Prepared slides	Epithelial tissues (Squamous, Cuboidal, Columnar) Connective tissue (Bone, blood) Nervous tissue Muscle tissue (Skeletal, smooth, cardiac), Euglena, Entamoeba, Plasmodium, Trypanosome Paramecium Mitosis and meiosis different stages, Different stages of Metamorphosis	1 each
10.	Specimens	Phylum Porifera, Coelenterata, Platyhelminthes, Nematoda, Mollusca, Annelida, Arthropoda, Fishes, Amphibians, Reptiles, Birds and Mammals	1 each

  
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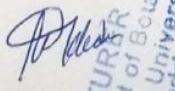
  
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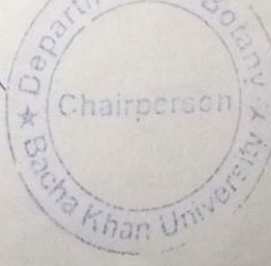


### List of Chemicals Botany and Zoology

	Name	Company	QTY	Unit
1.	Gallic acid	Sigma Aldrich	1	200g
2.	Top vision Agarose	Thermo Fisher Scientific	1	500g
3.	Tris-hcl	Thermo Fisher Scientific	1	500g
4.	Nutrient Agar	Sigma Aldrich	1	1 kg
5.	Ethidium bromide	Sigma Aldrich	1	2g
6.	DNA gel Loading dye	Thermo Fisher Scientific	1	5ml
7.	Proteinase K	Thermo Fisher Scientific	1	5ml
8.	Cell Lysis Buffer	Sigma Aldrich	1	100ml
9.	Dream Taq Green PCR master mix	Thermo Fisher Scientific	1	200 reaction s
10.	Taq Polymerase	Sigma	1	5ml
11.	Zinc Nitrate hexahydrate	Sigma	1	250mg
12.	Iron Acetate	Sigma	1	250mg
13.	Silver Nitrate	Sigma	1	250mg
14.	Starch Solution	Sigma	1	1L
15.	Iodine Solution	Sigma	1	1L
16.	Acarbose	Sigma	1	25g
17.	Phosphate buffer saline	Sigma	1	100 Tablets
18.	DMSO	Sigma	1	1L
19.	Triton X-100	Sigma	1	100g
20.	Alpha amylase enzyme	Sigma	1	100g
21.	Chromium nitrate	Sigma	1	250mg
22.	Cobalt acetate	Sigma	1	250mg
23.	Nickle Nitrate	Sigma	1	250mg
24.	Ethyl acetate	Sigma	1	2.5L
25.	Vincristine sulfate	Sigma	1	5g
26.	ABTS	Sigma	1	1g
27.	n-hexane	Sigma	1	2.5L

  
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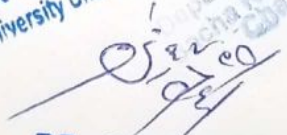
  
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28.	Sodium anhydrous phosphate	Sigma	1	1kg
29.	Potassium ferricyanide	Sigma	1	1kg
30.	Trichloro acetic acid	Sigma	1	500g
31.	Ferric chloride	Sigma	1	1kg
32.	Potassium per sulfate	Sigma	1	1kg
33.	Sulphuric acid	Sigma	1	2.5L
34.	Sodium Phosphate	Sigma	1	1kg
35.	Ammonium molybdnate	Sigma	1	500g
36.	Sodium bisulfate	Sigma	1	500g
37.	Sodium Phosphate dehydrate	Sigma	1	500g
38.	DPHH reagent	Sigma	1	1gm
39.	Ascorbic acid	Sigma	1	100g
40.	Aluminum chloride	Sigma	1	1kg
41.	Potassium acetate	Sigma	1	1kg
42.	Folin-Ciocalteu Reagent	Sigma	1	500ml
43.	Sodium carbonate	Sigma	1	1kg

  
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 Assistant Professor  
 Department of Botany  
 Bacha Khan University Charsadda

  
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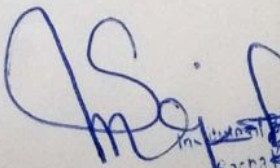
  
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## Chemical list for IBM

S.No	Names of Items	Qty	Unit
1	Sucrose	1	Kg
2	Ferrous Sulphate	1	Kg

S.No	Names of Items	Qty	Unit
1	Cod Liver oil	1	100ml
2	Liquid paraffin	1	Lit
3	Tannic acid	1	250g
4	Vanillin	3	Lit
5	Spirit ammonia aromatic	1	500ml
7	Sulphur	1	Kg
8	Calamine	1	250g
9	Iodine Liquid	1	Lit
10	Iodine Solid	1	25g
11	Phenol	2	2.5L
12	Boric acid	1	Kg
13	Ethanol Co	1	Lit
14	Ethyl acetate	2	2.5L
15	Thymol	1	500g
16	Peppermint oil	1	500ml
17	Salicylic acid	1	500g
18	Sodium bicarbonate	1	500g
19	Citric acid	1	500g
20	Tartaric acid	1	500g
21	Methyl cellulose	1	500g
22	Benzoic acid solution	1	Lit
23	Soybean oil	1	Lit
24	Vitamin A	1	25g
25	Vitamin D	1	25g
26	Natural & Artificial Flavors	1	Each
27	Sodium Benzoate	1	Kg
28	Potassium Sorbate.	1	500g
29	Mineral oil	1	Lit
30	Valanin	1	250g
31	Cedar wood oil	1	500ml
32	Tannic acid solution	1	Lit
33	Isopropyl alcohol	2	2.5L
34	Acid Alcohol	2	2.5L
35	Congo red	1	25g
36	Glutamine	1	25g
37	Methanol	2	2.5 L
38	Ethanol	2	2.5 L
39	n-Hexane	02	4 L

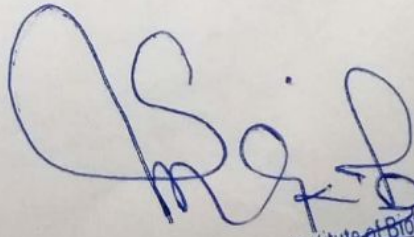
  
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40	Acetone	2	2.5L
41	Tris HCL	2	2.5L
42	Zinc nitrate	2	01kg
43	Mueler Hinton Agar	1	01kg
44	Nutrient agar	3	01kg
45	Nutrient broth	3	01kg
46	Tryptic Soy Broth(TSB) Media	3	1kg
47	Blood agar	2	1kg
48	Luria Bertani (LB) agar	2	1kg
49	Chocolate agar	2	1kg
50	MacConkey agar	2	1kg
51	Neomycin agar	2	1kg
52	Sabourad dextrose agar	2	1kg
53	Eosin Methylene Blue agar	1	1kg
54	Inoculation Loop	05	05
55	Aluminum foil	10	Each
56	Para film Roll	10	Each
57	Borers	05	Each
58	Spreader	05	Each
59	Surgical gloves (medium/ Large)	05 pkts	Each
60	Mask	10 pkts	Each
61	Colchicine (C <sub>22</sub> H <sub>25</sub> NO <sub>6</sub> )	2	100 gm
62	Tryptic soya Agar (TSA)	2	1 kg
63	Cotton buds	10 pkts	Each
64	Cotton rolls	05 pkts	Each
65	Test Tubes	500 Pcs	Each
66	Falcon Tubes	500 pcs	Each
67	Phenol	2	2.5L
68	Chloroform	2	2.5L
69	Isoamylalcohol	2	2.5L

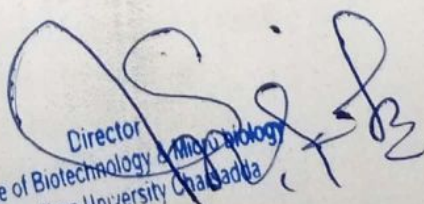
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S.No	Names of Items	Qty	Unit
1	Glass petri plates, 4 inch diameter	100	Each
2	Glass rods	25	Each
3	Inoculating loops	50	Each
4	Inoculating needles	50	Each
5	Micropipette 1000 $\mu$ l capacity tips	500	500pcs
7	Micropipette 100 $\mu$ l capacity tips	500	500pcs
8	Burette clamp	25	Each
9	Retort stand	35	Each
10	Graduated cylinder 1000 ml	5	Each
11	Graduated cylinder 500 ml	5	Each
12	Graduated cylinder 250 ml	5	Each
13	Graduated cylinder 100 ml	10	Each
14	Graduated cylinder 50 ml	10	Each
15	Graduated cylinder 10 ml	10	Each
16	Volumetric flasks 500 ml	10	Each
17	Volumetric flasks 250 ml	20	Each
18	Volumetric flasks 100 ml	10	Each
19	Glass slides	5	Each
20	Cover slips	10	Each
21	Wash bottles	10	Each
22	Slide rack for 25 Slide	10	Each
23	Test tubes	50	Each
24	Test tubes stands Plastic 24hole	15	Each
25	Cotton roll	5	Roll
26	Spirit lamps	15	Each
27	Tripod stand	25	Each
28	Disposable plastic gloves	10	Box
29	Sterile cotton swabs	4	100pcs
30	Glass Pipettes 10 ml	25	Each
31	Glass Pipettes 5 ml	25	Each
32	Pipette Bulb	25	Each
33	Pipette suction device	30	Each
34	Micropipette stands	3	Each
35	Funnel stands	15	Each
36	Pipette stands	15	Each
37	Microwave Oven (Geepass)	01	Each

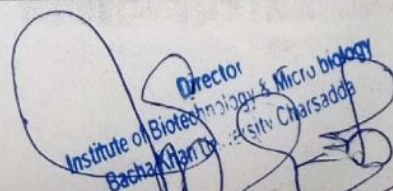
  
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4	Multiple position magnetic stirrer	<ul style="list-style-type: none"> <li>• Work plate dimension <math>\Phi 134\text{mm}(5\text{inch})</math></li> <li>• Plate material: Stainless steel with ceramic coating</li> <li>• Motor type: Brushless DC motor</li> <li>• Motor rating input [W] <math>1.8\text{W}\times 4</math></li> <li>• Power [W]: <math>515\text{W}\times 4</math></li> <li>• Heating Power[W]: <math>500\times 4</math></li> <li>• Voltage: 100-120V,60Hz; 200-240V,50 Hz</li> <li>• Stirring positions: 4</li> <li>• Max. stirring quantity of single position (H<sub>2</sub>O) 05 L</li> <li>• Max. magnetic bar[mm]: 40</li> <li>• Speed range [rpm]:200-500</li> <li>• Temp Rang: 52 to 125 °C</li> </ul>	01
5	Sonicator	<ul style="list-style-type: none"> <li>• Power Supply :220</li> <li>• Capacity: 6-8 L</li> <li>• Ultrasonic Power: 180 W</li> <li>• Frequency: 40 khz</li> <li>• Heater Power:150 W</li> <li>• Tank size :300 X 150 X 150 mm ( L x W x H )</li> </ul>	01

  
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## Equipment's List for Pharmaceutical Microbiology Laboratory

S.No	Equipment's	Specifications	Quantity
1	Centrifuges with vortex function	<ul style="list-style-type: none"> <li>• Speed max.:10000 rpm</li> <li>• Speed min.:100 rpm</li> <li>• Frequency (Centrifuges):60 Hz50 Hz</li> <li>• Capacity of vessels: 0.2, 0.4, 0.5, 1, 1.5, 2, 4, 5,7, 10 (ml)</li> <li>• Safety (Centrifuges): Imbalance warning, lid locking during motor run, emergency lid lock release</li> <li>• Voltage (Centrifuges): 220 V</li> <li>• Temperatur setting range: -20 °C to +40 °C</li> <li>• Capacity max.: 100 ml</li> </ul>	01
2	Colony counter	<ul style="list-style-type: none"> <li>• Compatible petri dish 50 to 150 mm</li> <li>• Power AC 100 to 240 V / 50 to 60 Hz</li> <li>• Package 1 pcs / box ; 2 pcs / carton</li> <li>• Dimensions 450 x 390 x 520 mm</li> <li>• Net Weight 6 kgs</li> </ul>	01
3	Microscopes	<ul style="list-style-type: none"> <li>• Magnification:&gt;1000X</li> <li>• Type: Biological</li> <li>• Number of Cylinder: Binoculars</li> <li>• Mobility: Portable</li> <li>• Stereoscopic Effect: Stereoscopic Effect</li> <li>• Usage: Teaching, Research</li> </ul>	05

  
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