

Laboratory equipment list

Sl #	Item	Specifications	Unit	Quoted rate	Remarks
1	ELISA reader	Item : Microplate reader Model : MB-530 Description HEALES: MB-530, 96 wells capacity, compatible with computers, software CD & accessories. It is controlled by computer to complete Enzyme Linked Immunosorbent Assay (ELISA). 96 well microplate, analyse and report, which are widely used in clinical diagnostic laboratories, software CD for installation or compatible with computers, enclose catalog	Per set		
2	Microscope	Dual Viewing Digital Microscope, Dual Viewing System w/pointer, complete with USB/HDMI camera, LED illumination, Objectives: 10x, 20x, 40x, 100x, best quality, specify and enclose catalog	Per set		
3	Microscope	Digital Microscope, LED illumination, Objectives: 10x, 20x, 40x, 100x, best quality, specify and enclose catalog	Per set		
4	Microscope	Stero zoom, digital microscope, LED illumination, Objectives: 10x, 20x, 40x, 100x, best quality, specify and enclose catalog	Per set		
5	Microscope	Warm stage microscope along with a hot plate for use in the evaluation of cattle semen, digital microscope, LED illumination, Objectives: 10x, 20x, 40x, 100x, best quality, specify and enclose catalog	Per set		
6	Digital colony counter	For bacterial colony counting	Per set		
7	Incubator	For bacterial culture or growth	Per set		
8	Mixer grinder	Philips (Classic-750) mixer grinder, 410174	Per set		
9	Refrigerator	Labfreeze, MR-PR120	Per set		
10	Water bath	Jouan, specify sizes	Per set		
11	DLC counter	Differential leukocyte counter for blood samples	Per set		
12	Autoclave	Temperature: 1-121 degree centigrade, prefer-WISECLAVE or equivalent, specify sizes, enclose catalog	Per set		

Laboratory consumables list

Sl #	Items	Specifications	Unit	Remarks	Quoted rate	Remarks
1	Brucella ELISA Kit	5 x 96 wells micro-titer plate, ELISA test to find the presence of Brucella Antibody, Contents: Brucella antigen coated plate, Wash buffer, Sample diluent, Enzyme conjugate, Conjugate diluent, TMB substrate, Stop solution, Positive control, Negative control, etc.	Per 5 x 96 wells pkt kit	Preferably, minimum of 2 years expiry validity		
2	<i>Mycobacterium Bovis</i> Antibody Test Kit	5 x 96 wells micro-titer plates, ELISA test to find the presence of <i>M. bovis</i> antibody in cattle serum. Contents: <i>M. bovis</i> antigen coated plate, Conjugate, Sample diluent, Enzyme conjugate, TMB substrate, Stop solution, wash concentrate (10x), Positive control, Negative control, etc.	Per 5 x 96 wells pkt kit	Preferably, minimum of 2 years expiry validity		
3	Rose Bengal Plate Test Reagent	RBT reagent to test Bovine brucellosis antibody in serum sample, 100ml	Per 100ml vial, specify	Preferably, minimum of 2 years expiry validity		
4	CMT reagent	For sub-clinical mastitis testing in milk samples, 500ml, with paddle	Per bottle	Preferably, minimum of 2 years expiry validity		
5	VTM	Viral transport medium swabs	Per piece	Preferably, minimum of 2 years expiry validity		
6	Rapid test kit for Avian Influenza Virus	Avian Influenza Virus Antigen Detection Rapid Test Kit, Type "A", 10 tests/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
7	Rapid test kit for Avian Influenza Virus	Avian Influenza Virus Antigen Detection Rapid Test Kit, Type "H5", 10 tests/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		

8	Infectious Bursal Disease rapid test kit	IBD antigen detection rapid test kit, 10 pouches/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
9	Canine Distemper Virus rapid test kit	CDV antigen detection rapid test kit, 10 pouches/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
10	New Castle Disease virus rapid test kit	NCD antigen detection rapid test kit, 10 pouches/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
11	Rapid rabies antigen detection test kit	Rapid rabies antigen detection test kit, 10 pouches/kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
12	Avian Leukosis Complex	Rapid test kit with 10 packs box	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
13	African Swine Fever Virus Ag Rapid Test Kit	Rapid test kit for ASFV Antigen detection rapid test kit	Per 10 pouches pkt kit	Preferably, minimum of 2 years expiry validity		
14	Nitrile gloves	Resistant to xylene and formalin, No. 7 and 6.5	Per 50 pair pkt			
15	Cryogenic marker micro-tip	Water resistant, permanent	Per piece			
16	Cotton	Absorbent, 450grams roll, best quality, dust free	Per roll			
17	Cryo rack or box	Serum storage box/Cryo-box, 96 tubes capacity	Per piece			
18	Cryo tags	1000pcs/pkt, 38/19mm, Cat.No. 523090	1000 stickers/pkt			
19	Cryo-vials	Polypropylene, Sterile, cryo-tape/sticker already labelled, auto-claveable, 1-2ml capacity, 100 pcs/pkt	Per 100 pcs pkt			

20	Glass slide	Frosted end, glass slide, best quality, 72 x 25mm	Per 50 pcs pkt			
21	Vacutainer needle	18 gauge, 100 pieces/pkt	Per 100 pcs pkt			
22	Vacutainer	EDTA, 5ml, 100 pieces/pkt	Per 100 pcs pkt			
23	Vacutainer	Plain, 7ml with clot activator, 100 pieces/pkt	Per 100 pcs pkt			
24	Vacutainer adaptor	For holding the vacutainer for blood collection	Per piece			
25	Hand sanitizer	Broad spectrum anti-microbial & viruses	Per 500ml vial			
26	Control High 2.5 ml (ABX Minotrol 16)	MX430H (Lot No.)	Per 2.5ml vial			
27	Control Low 2.5 ml (ABX Minotrol 16)	MX430L (Lot No.)	Per 2.5ml vial			
28	Control Neutral 2.5 ml (ABX Minotrol 16)	MX430N (Lot No.)	Per 2.5ml vial			
29	Minocclair 100ml	2103.3L 13 (Lot no.)	Per 100ml vial			
30	ABX VETPACK	210111W3A (Lot no.)	Per set			
31	Dehydrated Alcohol	Ethanol BP, 450ml	10 bottles			
32	Iso-propyl alcohol	500ml	5 bottles			
33	OPD Tablets (o-Phenylene diamine Dihydrochloride)	30mg, 50 Tablets, Sigma Chemicals Company	5 bottles			
34	Carbonate-Bicarbonate Buffer Capsule	Sigma Chemicals Company	50 Capsules vial			
35	Virkon	Disinfectant	500 grams			
36	Acetone	High grade, 99.9-100%, (CH ₃) ₂ CO, molecular weight - 58.8, Assay by GC is minimum of 99.5%, ASC grade, 500ml, 2.5 Litres bottle	Per bottle			
37	N/10 hydrochloric acid (HCL)	100ml	100ml			

38	Phosphate Buffered Saline (PBS)	SIGMA, to dissolve 1 tab/250ml water,	100 Tabs/vial			
39	Zinc Sulphate	500gms	500grams			
40	Creatine monohydrate	50gms	50grams			
41	Potassium hydroxide pellets	500gms	500grams			
42	Sodium hydroxide	500gms	500grams			
43	Sodium chloride	Extra pure Min. assay-98% 500gm	500 grams			
44	Tri-Sodium Citrate	250gms	250grams			
45	Aluminum foil	300mm x 9mts, Kitchen wrap, per roll	Per roll			
46	Adhesive	Johnson plaster, 10cm x 10meters, per roll	Per roll			
47	Cotton	Absorbent, 400gms, sterile, per roll	Per roll			
48	Face mask	Non-woven, 2 Ply Tie, Bulk pack of 100 pieces/pack, Ambassador,	Per pkt			
49	N-Hexane	For Aflatoxin digestion test	100ml vial			
50	Blood analyzer printer	For blood analyzer model: HORIBA-ABX Micros ESV-60	Per set			
51	Petroleum ether	500ml	Per bottle			
52	Giemsa's stain	100ml	Per bottle			

AI and LN2 equipment/ items list

SI #	Items	Specification	Unit	Quoted rate	Remarks
1	Universal AI Gun (Imported)	For bovine AI used, Can be used with all AI sheath types and for both 0.25 ml and 0.5 ml semen straws sizes, IMV or Minitube	Nos		
2	QuickLock AI gun	All purpose AI gun for all types of straws and sheaths, split or non split, Stainless steel and sterilisable parts only, Sheath fixation and release very easy by just pressing a knob, One hand only sheath fixation and release, Unique design for safe and centered straw alignment every time, IMV or Minitube	Nos		

3	AI / Insemination Gloves	100 per packet, 5 fingers, super sensitive, Ultra thin, durable, IMV or Minitube	Packet		
4	Universal AI sheath (splitted, Imported)	50 per packet, With slit or split, Suitable & tight fit with all types of semen straw and AI gun, transparent adapters for better visual control of straw position, soft shape tip, IMV or Minitube	Packet		
5	Manual semen straw cutter	Ergonomic shape, Precise cutting of 0.25 and 0.5 ml straws, Easy to keep clean	Nos.		
6	Artificial Insemination (AI) Gun Warmer	Heated, temperature controlled carrying case for loaded AI guns of cattle. To keep AI guns at correct temperature of 95 degrees F. Fully portable. Kit includes 12V rechargeable battery, belt or shoulder strap, 100V AC wall adapter, 12V DC auto adapter, spare liner and amp	Nos.		
7	QuickLock Heater to transport AI gun at constant Temperature	Battery operated, with carrying strap to carry AI guns at a constant temperature, Thawed semen will not loose temperature in pre warmed AI gun, Very robust and easy to clean material, bag can be washed, Strap allows different ways of carrying the bag, Rechargeable battery, works for approx. 8 hours, Temperature setting : 35 degree C, other values optional, with Charger for 220 V	Nos.		
8	Bovine Thawing kit	CITO Thaw Unit, 12 V, standard setting 38 degree C, with control unit and lift	Set		
9	AI kit Box	Ruggedly designed to withstand years of usage, for sanitary storage of AI items	Set		
10	Thermometer	For measuring AI thawing water temperature. Temperature range: 0 to 100 degree C	Nos		
11	AI straw tweezers / AI straw forceps	Half cc AI straws, 12 to 15 cm length, Stainless steel Tweezers or Forceps suitable for both 0.25m and 0.5ml semen straws, Special groove in the end so that AI straws can be firmly picked out of goblets without crushing the straw	Nos		
12	Professional Full length AI Apron	Professional apron Full length from neck to toes , Light weight, Waterproof, Washable fabric, Durable, Adjustable straps or belts at the neck and waist, to keep cloths like Shirt and pants clean during AI, Full length from neck to toes, Export quality	Nos		
13	LN ₂ Container (Transport Can)	55 Litres capacity, With side ring & bottom pad for LN ₂ Storage, Export Quality	Nos		

14	LN ₂ Container (Transport Can)	50 Litres capacity, With side ring & bottom pad for LN ₂ Storage, Export Quality	Nos		
15	LN ₂ Container (Reserve Can)	35 Litres capacity, With side ring & bottom pad for LN ₂ Storage, Export Quality	Nos		
16	LN ₂ Container (Semen Bank)	35 Litres capacity, With side ring, bottom pad and Canisters inside for storage of Frozen semen, Export Quality	Nos		
17	LN ₂ Container (For Mobile AI)	3 Litres capacity, With Canister inside & carrying belt for semen storage & mobile AI, Export Quality	Nos		
18	LN ₂ Container (For Mobile AI)	5 Litres capacity, With Canister inside & carrying belt for semen storage & mobile AI, Export Quality	Nos		
19	Lid or Cap for LN ₂ container	For IN 50 Litres LN2 Containers, Extra Lid or cap for Transport Can	Nos		
20	Lid / Cap for LN ₂ container	For 35 Litres LN2 Containers, Extra Lid or cap for Semen bank	Nos		
21	Lid / Cap for LN ₂ container	For 3 to 5 Litres LN2 Containers, Extra Lid or cap for Mobile Container	Nos		
22	SS Funnel with Handle	70 cm diameter, durable able to withstand very low temperature, For transferring LN2 from one Container to another	Nos		
23	Dip stick / Measuring stick for Liquid Nitrogen level (AI Tank Dip stick)	65 cm OR 25.5 inches length, Durable and Flexible dipstick, Black in colour to measure the depth of liquid nitrogen in Cryogenic container. The dip stick permits rapid and easy reading of a frost line to measure the depth of liquid nitrogen	Nos		
24	Cool box for holding Liquid Nitrogen (-196 °C)	Quality Cool box compatible and able to hold Liquid Nitrogen (-196 °C) for easy transfer of Frozen bovine semen. Dimensions: 8 x 7.8 x 6 in. (L x W x H)	Nos		
25	Tilting Trolley	For moving and transferring LN2 Containers (Transport Cans)	Nos		
26	Transfer Device	Manual Transfer device used for transferring LN2 from Transport Cans (55 Litres Capacity) to other LN2 Containers	Nos		

27	Self-pressurized Liquid Nitrogen hand pump for 50 mm neck diameter LN2 containers	Ideal equipment to withdraw Liquid nitrogen from 50 mm neck diameter LN2 Container, Small volume, light in weight, easy to operate and carry. Used for fast and quick drainage of liquid nitrogen with minimal loss of LN2	Nos		
28	Bovine Pregnancy Test using Bovine Pregnancy associated Glycoproteins (PAGs) with Reagents	Enzyme-linked immunoassay for the detection of early pregnancy-associated glycoproteins (early PAGs) in serum or EDTA plasma of cattle as a marker for pregnancy. Bovine Pregnancy Test can be used in serum and EDTA plasma as early as 28 days after breeding in cows with no interference from a previous pregnancy as early as 60 days after calving	Set		
29	GnRH (Receptal)	GnRH, Receptal, 10 ml vial	10 ml vial		
30	Plastic ear tags for Cattle	Should have provision for eight digit numbers per ear tag, Female Single flap including Global extended Male buttons Small buttons, Plastic, Yellow colour, Light, Waterproof, Durable for proper identification of cattle	No.		
31	Ear tag applicator	Universal ear tagger for Plastic ear tags	No.		
32	Permanent Marker pen for plastic ear tags	Waterproof, Durable, Permanent marker (Export quality)	No.		
33	Helium gas	99% purity, Capacity: 47 litres with cylinder, to be used in the LN2 production machine	No.		
34	Petroleum ether	Boiling rate 60-80 degrees celsius, Capacity 2.5 litres bottle, to be used for maintenance and servicing of LN2 production machine	No.		
35	R-22	Capacity: 8 kgs with cylinder, to be used as refrigerant in milk chillers	No.		
36	R-404a	Capacity: 8 kgs with cylinder, to be used as refrigerant in milk chillers	No.		

Note: Firms quoting for Medicinal products should have valid Medical Firms as per the Medicines Act of Kingdom of Bhutan 2003 & the Bhutan Medicines Rules and Regulations 2012

Vehicle hiring for LN2 transportation

Sl #	Items	Specification	Unit	Quoted rate	Remarks
1	Light vehicle	Single cabin bolero	Per km		