

## TECHNICAL SPECIFICATION SHEET

### (1) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Seed Screens (Sieves)		2 sets
<b>Technical Specifications:</b>		
1	Capacity: Diameter 410mm x Depth 150mm	
2	Round brass; Top lid and bottom pan	
3	Each set; 14 mesh sizes – 2,3,4,5,6,7,8,9,10,11,13,15,17,19,	
<b>Manuals:</b>		
1	Operators handbook in English	

### (2) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Seed Sampler (Nobbe Triers)		4 sets
<b>Technical Specifications:</b>		
1	Made of brass, smooth polished	
2	2 sizes - Length 900mm and 500mm each with 5 openings	
3	With casing for storage.	
<b>Manuals:</b>		
1	Operators handbook in English	

### (3) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Seed Grain Precision Divider		4
<b>Technical Specifications:</b>		
1	Size: 38"x31"x51" (HxWxD).	
2	Hopper capacity: 2 kg	
3	Electric motor: 0.5 HP	
4	Material: Chrome plated brass and mild steel	
5	Operation principle: motor driven, centrifugal action	
6	Power rating: 220-250 AVC	
<b>Manuals:</b>		
1	Operators handbook in English	

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### (4) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Seed Sampling Triers (Sleeve type)		4
<b>Technical Specifications:</b>		
1	Material: Brass or aluminum	
2	Quality: Smooth finish	
3	Length: 75 cm with 5 openings and compartments	
4	Supplied with its bag for storage and transportation	
<b>Manuals:</b>		
1	Operators handbook in English	

### (5) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Digital sieve shaker:		4
<b>Technical Specifications:</b>		
1	Materials: stainless steel with at least 8 decks	
2	Operation: Vertical vibration with provisions for fine, intermittent, and continuous vibrations	
3	Amplitude approx. 5mm	
4	Speed: rotation 1450 rpm; Power: 220v/50Hz	
<b>Manuals:</b>		
1	Operators' handbook in English	

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### (6) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Riffle divider:		2
Technical Specifications:		
1	Materials: stainless steel	
2	Capacity: 3-4 liters with at least 14 chutes each measuring 3/8/inches	
3	Amplitude approx. 5mm	
4	With at least 4 pans	
Manuals:		
1	Operators' handbook in English	

### (7) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Centrifugal divider:		2
Technical Specifications:		
1	Bench mounted; plated steel hoppers	
2	Capacity: 4 liters; spinner speed approx. 450rpm; motor 50w; power 220v/50Hz	
Manuals:		
1	Operators handbook in English	

### (8) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Boerner divider:		2
Technical Specifications:		
1	Bench mounted, with plated steel hoppers	
2	Material: stainless steel; brass coated-well polished; accuracy +/- 1% on 100g sample; cone with 38 pockets	
Manuals:		
1	Operators' handbook in English	

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### (9) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Automatic Seed Counter		2
Technical Specifications:		
1	Suitable for both free and bulk counts; adjustable counting speed; automatic deceleration; automatic motor protection; crop	
2	accuracy +/- 2%; speed over 100seeds/3min for sesame; counting range 1-99999; Power rating AC 220/50Hz	
Manuals:		
1	Operators' handbook in English	

### (10) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Seed Counting boards		8
Technical Specifications:		
1	Wooden seed counting board; treated hard wood; 100 holes size of grains (maize + beans)	
2	Approx. 2000mmx3000mm	

### (11) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Vacuum seed counters		2 sets
Technical Specifications:		
1	Power rating; 220 to 250 V	
2	Weight; 6kg	
3	Two heads for cabbage (1.3mm borehole diameter) and wheat (1.5mm borehole diameter)	
Manuals:		
1	Operators handbook in English	

### (12) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
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<b>Description: Bloater papers (flat and pleated)</b>		4000 pieces
<b>Technical Specifications:</b>		
1	Flat bloater paper; Approx. 20cmx30cm	
2	Pleated paper; Approx. 20cmx30cm	
3	Colour: White or grey	

### (13) REQUIRED TECHNICAL SPECIFICATIONS

<b>General laboratory equipment:</b>		<b>Qty Required</b>
<b>Description: Magnifier</b>		2
<b>Technical Specifications:</b>		
1	Handheld with illumination.	
2	Circular 3.5 to 4 inches diameter.	
3	Battery operated.	
<b>Manuals:</b>		
1	Operators handbook in English	

### (14) REQUIRED TECHNICAL SPECIFICATIONS

<b>General laboratory equipment:</b>		<b>Qty Required</b>
<b>Description: Bench top pH meter</b>		2
<b>Technical Specifications:</b>		
1	Analog Table-top model easy to read mirror scale mV scale for ORP measurement and titrations.	
2	With combined glass electrodes with BNC connector.	
3	PH/mV/ORP with temperature setting for compensation. PH range 0.000 to 14.000, resolution 0.02 - two point buffer calibration. Electrode support stand Operating voltage 220V 50Hz	
<b>Manuals:</b>		
1	Operators handbook in English/	

## TECHNICAL SPECIFICATION SHEET

(15) REQUIRED TECHNICAL SPECIFICATIONS	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Grain moisture tester</b>	2
<b>Technical Specifications:</b>	
1	Digital with SD card for recording data transferable to MS Excel
2	Fast seed moisture testing;
3	Handheld; Immediate repeatable moisture testing;
4	Operates on 9V battery;
5	Moisture range: 8-40%
6	Seed temperature range: 0-40C;
7	Automatic temperature compensation with a resolution of 0.1%,
8	Accuracy of + or – 0.5% for vegetable seeds (tomato, eggplant, cucurbits, okra, etc)
9	Purpose: for vegetable seeds (tomato, eggplant, cucurbits, okra, etc.) moisture determination
10	Adjustable set point indicator with alarm.
11	Displays the average and highest readings and SD and coefficient of variation for stored readings.
12	Storage of 150 accumulated readings
13	Should include stainless steel probe.
<b>Manuals:</b>	
1	Operators handbook in English

## TECHNICAL SPECIFICATION SHEET

<b>(16) REQUIRED TECHNICAL SPECIFICATIONS</b>	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Weighing Balances</b>	2
<b>Technical Specifications:</b>	
1	Capacity 1500gm; 16mm LCD display;
2	Pans size 120mm diameter; ABS plastic housing
3	Wind shield; AC adapter (12v/500mA)
4	Rechargeable battery; Gross weight 1.5 – 2.0 kg
<b>Manuals:</b>	
1	Operators handbook in English

<b>(17) REQUIRED TECHNICAL SPECIFICATIONS</b>	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Weighing Balances</b>	2
<b>Technical Specifications:</b>	
1	Capacity 500gm; 12mm LCD display;
2	Pans size 100mm diameter; ABS plastic housing
3	Wind shield; AC adapter (12v/500mA)
4	Rechargeable battery; Gross weight 1.0 – 1.5 kg
<b>Manuals:</b>	
1	Operators handbook in English

<b>(18) REQUIRED TECHNICAL SPECIFICATIONS</b>	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Soil/Sample divider</b>	4
<b>Technical Specifications:</b>	
1	Made of polished brass or aluminum;
2	Smooth without compartment that can hold seeds
3	Minimum 14 chutes; with cleaning brush
4	Each supplied with at least 4 holding containers

## TECHNICAL SPECIFICATION SHEET

(19) REQUIRED TECHNICAL SPECIFICATIONS	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Magnifying lens with tripod stand + light</b>	2
<b>Technical Specifications:</b>	
1	Lighted desktop magnifying lens
2	Heavy duty stands with 6 inch lens
3	Power x40
(20) REQUIRED TECHNICAL SPECIFICATIONS	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Germination Boxes</b>	400 pcs
<b>Technical Specifications:</b>	
1	Transparent plastic container with fitting cover top
2	Dimensions: 30 cm (L)x 20cm (W)x 10cm (D)
3	Flexible - resistant to breaking

(21) REQUIRED TECHNICAL SPECIFICATIONS	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Germination Cabinets</b>	2
<b>Technical Specifications:</b>	
1	Programmable: light, temperature, humidity by time; Dimension 120cmx70cmx180cm
2	LCD screen display – accurate control; over-temperature and sensor abnormality protection; power fluctuation protection;
3	Temperature range 0-50 deg cent.; temperature fluctuation +/- 0.5 deg cent.; humidity range 50 – 90% RH
4	Luminance 0-8000Lux but adjustable; Power rating 220-240v/ 50HZ; Programmable functionality diurnal 24 hours; Fluorescence lamps enough to give required light intensity to the interior of the chamber; Programmable light control on real time controller.
5	Operator Manual in English and at least 1 year warranty

(22) REQUIRED TECHNICAL SPECIFICATIONS	
<b>General laboratory equipment:</b>	<b>Qty Required</b>
<b>Description: Purity boards</b>	10

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Technical Specifications:	
1	Wooden board with white smooth vinyl strongly glued on top
2	Dimensions: 40cmx 20cm
3	Material; hard wood

### (23) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Calibration weights with certificate		2 sets
Technical Specifications:		
1	Weights; 100gm, 200gm, 1000gm, 2000gm	
2	Stainless steel, tapered neck;	
3	With certificates; appropriate containers to avoid corrosion and contamination	

### (24) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Lab. Petr-dishes		3 dozen (one dozen of each size)
Technical Specifications:		
1	Material: Polystyrene	
2	Sizes: 100mmx15mm; 100mmx20mm; 60mmx15mm	

### (25) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Dust pans		10
Technical Specifications:		
1	Material: Chemical-resistant, polypropylene dustpan for cleaning up the remnant particles of seed and other solids	
2	Dustpan with groove for broom attachment and folds down to floor for easier pickup.	

## TECHNICAL SPECIFICATION SHEET

### (26) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Pre-chilling refrigerator/incubator		3
<b>Technical Specifications:</b>		
1	Single chamber with lighted on/off switch, programmable touch screen, read out showing relative humidity, temperature, and time of day.	
2	Controlled temperature refrigerator of -5 to 15 o c, interior capacity 20-25cu.ft., and 10 interior trays.	

### (27) REQUIRED TECHNICAL SPECIFICATIONS

General laboratory equipment:		Qty Required
Description: Sand sterilizer/laboratory oven		3
<b>Technical Specifications:</b>		
1	Temperature 20-300°C, of welded steel construction, 3-5 wire shelves, operating on 120-240V 50/60Hz, chamber dimension 18"x12"x16",	
2	For sand and media sterilization, controlled temperature	