

## Annexure A: Schedule of Requirement and Technical Specifications

Membrane Filtration Technique (MFT) assembly setup as per specifications given below or with better specifications:

Features		Requirements
1	Purpose	For testing water samples for microbiological contamination. Membrane filtration assembly for microbial testing in water sample (for total coliforms, E. coli etc.) and other beverage/filterable samples.
2	Quantity	No of MFT assembly required: 148 Nos. <i>For 148 sub-divisional Laboratories of GSDA</i>

For Membrane Filtration Technique (MFT) setup following set of equipment and media are required

Sl. No	Description of Items included in MFT Setup	Quantity Required for 1 (One) MFT Setup for 1 (One) Laboratory	Quantity Required for 148 Laboratories	Unit	Specifications
1	2	3	4	5	6
	<b>INSTRUMENTS</b>				
1	Filter Holder Manifolds (SS)	1	148	Nos	<ul style="list-style-type: none"> <li>• 3 Place Manifold with non return valve</li> <li>• MOC SS 316L all parts autoclavable</li> <li>• 1-way valves and filter holder support</li> <li>• Each component should be removable and autoclavable</li> <li>• Display to be attached to Manifold housing for convenient monitoring of Auto and Manual Mode of Vacuum Pump with Foot Switch of Water Level Indicator, running time of the system</li> <li>• Vacuum Connection to the right or left side</li> <li>• MOC of Valve: SS 316L</li> <li>• Warranty: 3 years</li> <li>• CE Certificate</li> </ul>
2	Oil Free Vacuum Pump	1	148	Nos	<ul style="list-style-type: none"> <li>• MOC of Housing: ABS</li> <li>• Max. power : 80 W</li> <li>• Complies with ISO Standard 8199 guidelines for microbiological analysis</li> </ul>

Sl. No	Description of Items included in MFT Setup	Quantity Required for 1 (One) MFT Setup for 1 (One) Laboratory	Quantity Required for 148 Laboratories	Unit	Specifications
					(Max. vacuum: 750 mBar) <ul style="list-style-type: none"> <li>• Max. flow rate : 3.8 to 4.0 L/min</li> <li>• Overflow protection: Yes</li> <li>• Noise level: Less than 60 dB</li> <li>• Warranty: 3 years</li> <li>• CE certification</li> </ul>
3	Colony Counter	1	148	Nos	<ul style="list-style-type: none"> <li>• Power: 12W</li> <li>• Accuracy: 99.9%</li> <li>• Accessories: Marking Pen, Magnifying Lens, Lens Holder, Operation Manual and Dust Cover</li> <li>• Magnification: 110 mm diameter Magnifying glass</li> <li>• Material: Mild Steel</li> <li>• Probe: Auto Marker Per probe for marking and counting simultaneously</li> <li>• DiscDiameter: 110 millimeters</li> <li>• Illumination: Uniform glare free illumination by cool fluorescent tube light</li> <li>• Display: Digital LED</li> <li>• Warranty: 3 years</li> <li>• CE certification</li> </ul>
	<b>ACCESSORIES</b>				
4	Polypropylene Waste Bottle	1	148	Nos	<ul style="list-style-type: none"> <li>• Capacity: 4,000 ml</li> <li>• Overflow Protection</li> <li>• Drain</li> <li>• Graduated increment: 500ml</li> <li>• Autoclavable</li> </ul>
5	Silicone Tube	1	148	2 meter each	<ul style="list-style-type: none"> <li>• Material: Silicon</li> <li>• Material Certificate</li> </ul>
6	Cellulose Nitrite Membrane	1	148	Pkt.(One packet of 100 Individually packed filter papers)	<ul style="list-style-type: none"> <li>• 0.45 Micron dia. 47 mm</li> <li>• Shelf Life: 5 years</li> <li>• Pre-sterile filter paper</li> <li>• Individually packed</li> <li>• Grided Paper</li> </ul>
7	Culture dishes	100	14,800	Nos	<ul style="list-style-type: none"> <li>• Shape: Round</li> <li>• Colour: Transparent</li> <li>• Material: polystyrene</li> </ul>

Sl. No	Description of Items included in MFT Setup	Quantity Required for 1 (One) MFT Setup for 1 (One) Laboratory	Quantity Required for 148 Laboratories	Unit	Specifications
					<ul style="list-style-type: none"> <li>• Size D × H: min 55 mm × 15 mm</li> <li>• Sterility: Ethylene Oxide sterilization</li> <li>• Packing Size: 10 sterile culture dishes in one pack</li> <li>• Warranty: 3 years</li> </ul>
8	Funnel (100 ml)	1	148	Pkt. (One packet of 100 Individually packed Funnel)	<ul style="list-style-type: none"> <li>• Funnel Capacity: 100 ml</li> <li>• Material: Polypropylene</li> <li>• Autoclavable</li> <li>• Filter Size: 47 mm</li> <li>• Graduation Increment: 50ml</li> <li>• Size (Diameter x H): approx. Dia. 55mm X 60 mm</li> <li>• Warranty: 3 years</li> </ul>
	<b>MEDIA</b>				
9	Chromogenic Coliform Agar	0.5	74	Kg	<ul style="list-style-type: none"> <li>• Make: Merck or HiMedia or Difco or Oxoid (as per ISO 9308-1)</li> <li>• Shelf Life: Min. 2 year</li> <li>• Should be provided with material safety data sheet (MSDS)</li> <li>• Cultural Response: more than 70% (Checked by NABL Accredited testing Laboratory)</li> </ul>

MISCELLANEOUS PARAMETERS	
Features	Requirements
User/Technical/Maintenance manuals	User/Technical/Maintenance manuals to be supplied in English in hard and soft copy
Warranty	<p>Onsite Warranty as mentioned above for individual components.</p> <p>Minimum 2 visits per year for the contract duration and visit whenever there is a requirement due to the breakdown of the equipment.</p> <p>(Refer Annexure B: Terms of Reference (ToR) for more details)</p>