

Equipment Specification Data Sheet

Equipment Name: pH Meter and conductivity meter
(Benchtop)

Document No.: DS-PHM 01

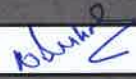


Revision: 01

Project No.: 120310

Project Name: Integrated Vaccines Complex,
Chengalpattu

Block Code	Block Name	Identification No.	Capacity	Quantity
F2	Bacterial formulation	F2-PHM-01	-	1
B4	Rabies Bulk	B4-PHM-01	-	1
B4	Rabies Bulk	B4-PHM-02	-	1
G1	Animal House	G1-PHM-01	-	1

NNE Pharmaplan India Limited

Name	Designation	Signature	Date
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Checked by			
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Equipment Name: pH Meter and conductivity meter
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Project Name: Integrated Vaccines Complex,
Chengalpattu


HLL Biotech Limited

Name	Designation	Signature	Date
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HLL Biotech Limited, Chennai		
nne pharma plan®	INTEGRATED VACCINES COMPLEX, CHENGALPATTU	
	Equipment Name	pH Meter and conductivity meter (Benchtop)
	Document No.	DS-PHM 01
	Revision No.	01
		
1	Process requirements	
1.1	To determine the pH and conductivity of the liquid samples.	
2	Equipment ID	
2.1	F2-PHM-01	
2.2	B4-PHM-01	
2.3	B4-PHM-02	
2.4	G1-PHM-01	
3	Technical Specification	
	pH meter	
3.1	Type	Digital, benchtop type with inbuilt printer
3.2	Model	Basic cGLP waterproof model, combined glass electrode with supporting stand
3.3	Quantity	5 No.
3.4	Display type	pH, temperature, 4 digit LCD with back light
3.5	pH range	0.00 - 14.00
3.6	pH Resolution and Accuracy	Resolution: 0.1, 0.01, 0.001 Voltage range, ± 1200 mV, Accuracy $\pm 0.01\%$
	Conductivity meter	
3.7	Type	Digital, benchtop type with inbuilt printer
3.8	Model	Basic cGLP waterproof model, combined glass electrode with supporting stand
3.9	Quantity	5 No.
3.10	Display type	Conductivity, temperature, 4 digit LCD with back light
3.11	Conductivity range	0.001 to 999999 μ S/cm
3.12	Conductivity Resolution and Accuracy	Resolution: 0.01 μ S to 0.1 mS Accuracy $\pm 0.05\%$
3.13	Temperature range	- 5 to 105 °C
3.14	Temperature resolution and Accuracy	Resolution: 0.1 °C, Accuracy: ± 0.1 °C
3.15	Calibration	minimum 3 points up to 6 points

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nne pharmaplan	INTEGRATED VACCINES COMPLEX, CHENGALPATTU		 <small>HLL BIOTECH LIMITED (Subsidiary of HLL Lifescare Limited) (A Government of India Enterprise)</small>
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3.16	Expected operational hours per day	24 hrs with stand-by mode	
3.17	Power requirement	To be compatible to standard Indian power supply socket	
4	Material of Construction		
4.1	Glass Electrode	The glass electrode must be made from Borosilicate glass for pH probe and conductivity probe.	
4.2	Body of the meter	Powder coated or Vendor to specify	
5	Specific Equipment requirement		
5.1	The pH meter must be microprocessor based precision with automatic temperature compensation and digital interface.		
5.2	The pH meter must have, stand with flexible arm, Electrode holder and universal power adaptor.		
5.3	Simultaneous measurement of pH and temperature.		
5.4	Instrument should be capable of Multipoint calibration with max. 3 buffers as per USP ranges.		
5.5	Ready made buffer solution of 4,7,10 to be provided - One set		
5.6	Automatic temperature compensation for pH measurements.		
5.7	LCD display to show the pH and temperature readings, audible beep indication during valid key operation.		
5.8	Expanded memory to store and recall minimum upto 50 data sets, calibration data with date and time, calibration reminder alarm.		
5.9	Spare pH electrode to be provided.		
5.10	The equipment shall be compatible for cleaning with all standard disinfectants.		
6	Other requirement		
6.1	Power: AC adapter, AA batteries (optional)		
6.2	Interface: USB or RS 232 for data collection		
6.3	pH meter should have a in-built printer for on the spot printing ex. pH, temperature, date and time intervals		
6.4	Easy and convinient to operate, printing condition by pressing buttons on the equipment		
6.5	Training/ demo for users on operations shall be provided.		
6.6	Thermo paper rolls with the all accessories of pH meter should be supplied.		
7	Regulatory aspects		
7.1	CE Certification		

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<div> <div>8</div> <div>Safety requirements</div> </div>		
Following facilities must be provided to protect personnel and equipment:		
8.1	Proper earthing is necessary	
8.2	Appropriate closure of all parts.	
8.3	On power failure equipment should come in failsafe condition	
<div> <div>9</div> <div>Documents</div> </div>		
Following documents, but not limited to these, should be supplied by the vendor as part of the supply package in hard copy as well as editable electronic file		
9.1	IOQ documents.	
9.2	Operation and maintenance manuals shall be provided along with IOQ documents during installation at the site	
9.3	Warrenty letter for 1 year from the date of supply.	
9.4	Calibration certificate of critical instruments with respect to the traceable national reference standard instrument and their calibration procedure	
9.5	NPL traceable Calibration certificates and calibration procedures	
<div> <div>10</div> <div>Timelines</div> </div>		
10.1	Not Applicable	
<div> <div>11</div> <div>Preferred list of Makes</div> </div>		
11.1	Mettler Toledo, Thermofischer Scientific, E & H	
NOTE: Accurate size and technical specification need to be mentioned by the vendor		

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Table-1: Equipment location						
Equipment ID	Block Name	Room Name	Room No	Room dimension in mm	Room height in mm	
F2-PHM-01	Bacterial formulation	IPQC	F2G029	2981 X 4830	3000	
B4-PHM-01	Rabies Bulk	Media Preparation	B4G027	6800 X 3930	2700	
B4-PHM-02	Rabies Bulk	Buffer Preparation	B4G028	6800 X 3835	2700	
G1-PHM-01	Animal House	Lab area - Testing	G1G055	4700 X 7300	2700	
Table-2: Change Log						
Date	Name	Revision	Section	Change/Comment		
11-07-2014	Niharika Ruhela	00	-	New document		
04-05-2015	Niharika Ruhela	01	All	Updated as per comments received from HBL dated 27-02-2015		
Table-3: Annexure						
Not applicable						