

Equipment Specification Data Sheet

Equipment Name: pH Meter and conductivity meter (Benchtop)

Document No.: DS-PHM 02

Revision: 00

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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HLL Biotech Limited

Name	Designation	Signature	Date
<b>Reviewed by</b>			
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Project Authority <i>Raman K.R</i>	C.E.O	<i>Raman K.R</i>	7-3-16

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HLL Biotech Limited, Chennai			
INTEGRATED VACCINES COMPLEX, CHENGALPATTU			
nne pharma plan*	Equipment Name	pH Meter and conductivity meter (Benchtop)	
	Document No.	DS-PHM 02	
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<b>1 Process requirements</b>			
1.1			To determine the pH and conductivity of the liquid samples.
<b>2 Equipment ID</b>			
2.1	F2-PHM 01		
2.2	B4-PHM 01		
2.3	B4-PHM 02		
2.4	G1-PHM 01		
<b>3 Technical Specification</b>			
<b>pH meter</b>			
3.1	Type	Digital, benchtop type with printer	
3.2	Model	Basic cGLP waterproof model, combined glass electrode with supporting stand	
3.3	Quantity	4 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 ± 0.01%	
<b>Conductivity meter</b>			
3.7	Type	Digital, benchtop type with printer	
3.8	Model	Basic cGLP waterproof model, combined glass electrode with supporting stand	
3.9	Quantity	4 No.	
3.10	Display type	Conductivity, temperature, 4 digit LCD with back light	
3.11	Conductivity range	0.001 to 9999999µS/cm or better	
3.12	Conductivity Resolution and Accuracy	Resolution:- 0.01 µS to 0.1 mS Accuracy ± 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 upto 6 points	

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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
<b>4</b>	<b>Material of Construction</b>	
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
<b>5</b>	<b>Specific Equipment requirement</b>	
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.	
<b>6</b>	<b>Other requirement</b>	
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.	
<b>7</b>	<b>Regulatory aspects</b>	
7.1	CE Certification	



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<b>8 Safety requirements</b>			
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		
<b>9 Documents</b>			
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		
<b>10 Timelines</b>			
10.1	Not Applicable		
<b>11 Preferred list of Makes</b>			
11.1	Mettler Toledo, Thermofischer Scientific, E & H		
<b>NOTE:</b> Accurate size and technical specification need to be mentioned by the vendor			

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	Document No.	DS-PHM 02			
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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	
10-02-2016	Ms. Niharika Ruhela	00	-	New document	
Table-3: Annexure					
Not applicable					