



**National Accreditation Board for
Testing and Calibration Laboratories**

CERTIFICATE OF ACCREDITATION

**NATIONAL RESEARCH AND TECHNOLOGY
CONSORTIUM (C-ACT)**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH,
INDIA

in the field of

CALIBRATION

Certificate Number: CC-2430

Issue Date: 13/12/2022

Valid Until:

12/12/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT)

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 1 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Permanent Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current 50 Hz	Using 5.5 digit DMM by Direct Method	300 mA to 10 A	0.74 % to 1 %
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current 50 Hz	Using 6.5 digit Digital Multimeter by Direct Method	100 mA to 3 A	0.58 % to 0.25 %
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Current 50 Hz	Using 5.5 digit Digital Multimeter by Direct Method	70 µA to 300 mA	4.6 % to 0.74 %
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage 50 Hz	Using HV Probe with Digital Multimeter by Direct Method	1 kV to 15 kV	7.5%



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 2 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
5	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Power (240 V 50 Hz, 1 A to 20 A , PF 0.2 to UPF)	Using Power Analyzer by Direct Method	240 W to 4.8 kW	4.2%
6	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Resistance at 1kHz	Using LCR Meter By Direct Method	1 Ohm to 100 kohm	0.15%
7	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage 50 Hz	Using 6.5 digit Digital Multimeter by Direct Method	10 mV to 1 V	0.5 % to 0.14 %
8	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage 50 Hz	Using 6.5 digit Digital Multimeter by Direct Method	1 V to 750 V	0.14%
9	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Capacitance at 1 kHz	Using Digital LCR Meter by Direct Method	1 pF to 1 µF	2.5 % to 0.08 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 3 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
10	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	Inductance 1 kHz	Using Digital LCR Meter by Direct Method	100 μ H to 10 H	0.4 % to 0.17 %
11	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current 50 Hz	Using multifunction Calibrator and Current Coil by Direct Method	10 A to 1000 A	0.7 % to 0.75 %
12	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current 50 Hz	Using Multifunction Calibrator by Direct Method	20 μ A to 10 mA	5.28 % to 0.15 %
13	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Current at 50 Hz	Using multifunction Calibrator by Direct Method	10 mA to 20 A	0.15 % to 0.15 %
14	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	AC Power (10 mV to 150 V, 5 mA to 3 A PF +/- 0.2 to 1)	Using Multifunction Calibrator by Direct Method	10 mW to 450 W	4.9 % to 0.49 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	4 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
15	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power (150 V to 1000 V, 3 A to 20 A PF +/- 0.2 to 1)	Using Multifunction Calibrator by Direct Method	90 W to 20 kW	0.49 % to 0.7 %
16	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Power (240 V 50 Hz, 1 A to 20 A 0.2 to UPF)	Using Power Analyzer and AC Power Panel by Direct Method	240 W to 4.8 kW	4.2%
17	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage 50 Hz	Using Multifunction Calibrator by Direct Method	1 V to 50 V	0.48 % to 0.24 %
18	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage 50 Hz	Using Multifunction Calibrator by Direct Method	50 V to 1000 V	0.24 % to 0.07 %
19	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	AC Voltage 50 Hz	Using Multifunction Calibrator by Direct Method	10 mV to 1 V	4.5 % to 0.48 %
20	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance 1 kHz	Using Capacitance Box by Direct Method	100 pF to 1 µF	2 % to 1.22 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	5 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
21	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Capacitance	Using Multifunction Calibrator by Direct Method	0.5 nF to 100 μ F	7.62 % to 0.6 %
22	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Inductance 1 kHz	Using Inductance Box by Direct Method	100 μ H to 10 H	3.5%
23	ELECTRO-TECHNICAL- Alternating Current (< 1 GHz) (Source)	Power Factor (Lead, Lag)	Using Multifunction Calibrator by Direct Method	0.2 to UPF	1.08 % to 0.35 %
24	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 5.5 digit DMM by Direct Method	1 μ A to 300 mA	9.7 % to 0.14 %
25	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6.5 digit Digital Multimeter by Direct Method	1 mA to 100 mA	0.3 % to 0.09 %
26	ELECTRO-TECHNICAL- DIRECT CURRENT (Measure)	DC Current	Using 6.5 digit Digital Multimeter by Direct Method	100 mA to 3 A	0.09 % to 2.5 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 6 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
27	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Current	Using 5.5 digit DMM by Direct Method	300 mA to 10 A	0.14 % to 0.64 %
28	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with Digital Multimeter by Direct Method	1 kV to 15 kV	6.7%
29	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6.5 digit Digital Multimeter by Direct Method	1 mV to 1 V	0.4 % to 0.01 %
30	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6.5 digit Digital Multimeter by Direct Method	1 V to 1000 V	0.01%
31	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6.5 digit Digital Multimeter by Direct Method	10 Mohm to 100 Mohm	0.05 % to 1.0 %
32	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6.5 digit Digital Multimeter by Direct Method	10 Ohm to 100 kohm	0.06 % to 0.015 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	7 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
33	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	Resistance	Using 6.5 digit Digital Multimeter by Direct Method	100 kohm to 10 Mohm	0.015 % to 0.05 %
34	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	1 μ A to 100 μ A	1.41 % to 0.03 %
35	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	1 mA to 100 mA	0.03%
36	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator and Current Coil by Direct Method	10 A to 1000 A	0.076 % to 0.6 %
37	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 μ A to 1 mA	0.03%
38	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Current	Using Multifunction Calibrator by Direct Method	100 mA to 20 A	0.03 % to 0.61 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	8 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
39	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Power (10 mV to 600V, 0.5 mA to 20 A)	Using Multifunction Calibrator by Direct Method	5 mW to 12 kW	1.2 % to 4.6 %
40	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	1 mV to 10 mV	1.12 % to 0.84 %
41	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	10 mV to 100 V	0.84 % to 0.013 %
42	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	100 V to 600 V	0.013 % to 0.014 %
43	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using DC voltage Source and 6.5 digit Digital Multimeter by Direct Method	50 V to 1000 V	0.14%
44	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	DC Voltage	Using Multifunction Calibrator by Direct Method	600 V to 1000 V	0.014 % to 0.010 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	9 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
45	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Insulation Resistance (50 V to 1000 V DC)	Using Multifunction Calibrator by Direct Method	100 kohm to 2 Gohm	1.3 % to 5.8 %
46	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box 4 Wire By Direct Method	0.01 Ohm to 1 Ohm	3.0 % to 0.1 %
47	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box 4 Wire By Direct Method	1 Ohm to 100 kohm	0.1%
48	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Multifunction Calibrator by Direct Method	100 kohm to 100 Mohm	0.05 % to 0.12 %
49	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope DC Amplitude Load 1 Mohm	Using Multifunction Calibrator by Direct Method	5 mV to 130 V	1.65 % to 0.24 %
50	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Sine Amplitude Load 1 Mohm / 1 kHz	Using Multifunction Calibrator by Direct Method	5 mV to 130 V	0.83 % to 0.35 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	10 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
51	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Sine Amplitude Load 1 Mohm / 50 Hz	Using Multifunction Calibrator by Direct Method	5 mV to 130 V	0.83 % to 0.35 %
52	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Square Waveform Load 1 Mohm / 1 kHz	Using Multifunction Calibrator by Direct Method	5 mV to 130 V	0.37 % to 0.51 %
53	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Time Marker	Using Multifunction Calibrator by Direct Method	10 ns to 1 s	0.58 % to 0.001 %
54	ELECTRO-TECHNICAL-ELECTRICAL EQUIPMENT (Source)	Oscilloscope Band Width	Using Multifunction Calibrator by Direct Method	50 kHz to 250 MHz	0.4%
55	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD / PRT	Using Temperature Calibrator by Direct Method	(-) 200 °C to 790 °C	1.2°C
56	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J-type	Using Temperature Calibrator by Direct Method	(-) 200 °C to 1200 °C	1.0°C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 11 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
57	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K-type	Using Temperature Calibrator by Direct Method	(-) 200 °C to 1200 °C	2.0°C
58	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple R-type	Using Temperature Calibrator by Direct Method	200 °C to 1700 °C	1.5°C
59	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S-type	Using Temperature Calibrator by Direct Method	200 °C to 1700 °C	3.5°C
60	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Frequency	Using 6.5 digit Digital Multimeter by Direct Method	10 Hz to 1 MHz	0.2 % to 0.02 %
61	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time Interval	Using Time Interval meter by comparison Method	10 s to 10 hr	4.2 % to 0.03 %
62	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multifunction Calibrator by Direct Method	10 Hz to 100 kHz	0.06 % to 0.006 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 12 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
63	ELECTRO-TECHNICAL-TIME & FREQUENCY (Source)	Frequency	Using Multifunction Calibrator by Direct Method	100 kHz to 10 MHz	0.006 % to 0.1 %
64	MECHANICAL-ACCELERATION AND SPEED	Tachometer (Non Contact Type)	Using standard Tachometer by comparison method	12 rpm to 25000 rpm	1.81 % to 0.18 %
65	MECHANICAL-ACOUSTICS	Sound Level Meter (at 1 kHz)	Using Sound level Calibrator by Direct Method	94 dB and 114 dB	1.2dB
66	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) L.C. 0.01 mm	Using Slip Gauge Blocks & Caliper Checker By Comparison Method	0 to 300 mm	10µm
67	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) L.C. 0.01 mm	Using Slip Gauge Blocks & Caliper Checker By Comparison Method	0 to 200 mm	8.5µm
68	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) L.C. 0.01 mm	Using Slip Gauge Blocks & Caliper Checker By Comparison Method	0 to 600 mm	12.9µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 13 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
69	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Caliper (Vernier/Dial/Digital) L.C. 0.02 mm	Using Slip Gauge Blocks & Caliper Checker By Comparison Method	0 to 1000 mm	20.46µm
70	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Coating Thickness Gauge L.C. 0.1/1 µm	Using Standard Foils by Comparison Method	Upto 965 µm	4.26µm
71	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Depth Gauge (Vernier/ Dial/ Digital) L.C. 0.01 mm	Using Caliper Checker and Surface Plate by Comparison Method	0 to 600 mm	14.4µm
72	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Bore Gauge L. C. 0.001mm	Using Single Axis Measuring Machine by Comparison Method	Upto 1 mm	1.7µm
73	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Indicator L.C. 0.001 mm	Using Single Axis measuring machine by Comparison Method	0 to 10 mm	1.73µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	14 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
74	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Dial Thickness Gauge L.C. 0.001 mm	Using Slip Gauge Blocks by Comparison Method	0 to 25 mm	1.2µm
75	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Feeler Gauge	Using Micrometer By Comparison Method	Upto 1 mm	1.4µm
76	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Foils	Using Single axis measuring Machine By Comparison Method	10 µm to 965 µm	2.3µm
77	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Height Gauge (Vernier/ Dial/ Digital) L.C. 0.01 mm	Using Caliper Checker and Surface Plate by Comparison Method	0 to 600 mm	14.6µm
78	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Length Gauge/ Setting Master	Using Single axis measuring Machine by Comparison Method	100 mm to 185 mm	3.1µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2430

Page No

15 of 76

Validity

13/12/2022 to 12/12/2024

Last Amended on

18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
79	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Length Gauge/ Setting Master	Using Single axis measuring Machine by Comparison Method	185 mm to 280 mm	4.2µm
80	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Length Gauge/ Setting Master	Using Single axis measuring Machine by Comparison Method	Upto 100 mm	2.4µm
81	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Measuring Pin	Using Single axis measuring Machine by Comparison Method	1 mm to 20 mm	2.3µm
82	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer L.C. 0.001 mm	Using Slip Gauge Blocks By Comparison Method	0 to 25 mm	1.3µm
83	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Micrometer L.C. 0.001 mm	Using Slip Gauge Blocks By Comparison Method	Upto 300 mm	4.5µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 16 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
84	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Single axis measuring Machine by Comparison Method	1 mm to 85 mm	2.3µm
85	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Plug Gauge	Using Single axis measuring Machine by Comparison Method	85 mm to 185 mm	3.1µm
86	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge	Using Single axis measuring Machine by Comparison Method	25.4 mm to 300 mm	4.6µm
87	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Plain Ring Gauge	Using Single axis measuring Machine by Comparison Method	6.5 mm to 25.4 mm	2.9µm
88	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Radius Gauge	Using Profile Projector By Comparison Method	Upto 100 mm	9µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	17 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
89	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge	Using Slip Gauge Blocks by Comparison Method	2 mm to 25 mm	1.5µm
90	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Snap Gauge	Using Slip Gauge Blocks by Comparison Method	25 mm to 150 mm	2.7µm
91	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Aperture Size)	Using Vernier Caliper By Comparison Method	4 mm to 50 mm	20µm
92	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Aperture Size)	Using Profile Projector By Comparison Method	40 µm to 4000 µm	7µm
93	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Test Sieves (Aperture Size)	Using Vernier Caliper By Comparison Method	50 mm to 125 mm	30µm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	18 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
94	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Plug Gauge (Effective Diameter)	Using Single axis measuring Machine by Comparison Method	M 1 to M 100	2.41µm
95	MECHANICAL-DIMENSION (BASIC MEASURING INSTRUMENT, GAUGE ETC.)	Thread Ring Gauge (Effective Diameter)	Using Single axis measuring Machine by Comparison Method	6 mm to 100 mm	2.4µm
96	MECHANICAL-DIMENSION (PRECISION INSTRUMENTS)	Single Axis Measuring Machine (Resolution: 0.0001mm)	Using Slip Gauge Grade 'O' by Comparison Method	Upto 100 mm	1.53µm
97	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure-Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	0 to 588.4 bar	0.14% of rdg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	19 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
98	MECHANICAL-PRESSURE INDICATING DEVICES	Negative Pressure - Analog & Digital Vacuum Gauges, Pressure Transducers/ Transmitters with digital pressure indicator	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	(-) 0.9 bar to 0 bar	0.0059bar
99	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure - Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Differential Pressure Sensor by Comparison as per DKD R-6-1	0 to 10 mbar	0.06mbar
100	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure - Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Differential Pressure Sensor by Comparison as per DKD R-6-1	0 to 2.5 mbar	0.023mbar



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	20 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
101	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure - Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	0 to 3 bar	0.0078bar
102	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure - Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	0 to 30 bar	0.06bar
103	MECHANICAL-VOLUME	Burette, Pipette, Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights F1 Class & Balance Resolution : 10 mg and Distilled Water by Gravimetric Method as per ISO 4787	> 500 ml to 2000 ml	0.018ml
104	MECHANICAL-VOLUME	Burette, Pipette, Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights E1 Class & Balance Resolution : 1 mg and Distilled Water by Gravimetric Method as per ISO 4787	> 100 ml to 500 ml	4.4µl



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	21 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
105	MECHANICAL-VOLUME	Burette, Pipette, Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights E1 Class & Balance Resolution : 0.1 mg and Distilled Water by Gravimetric Method as per ISO 4787	> 20 ml to 50 ml	0.3µl
106	MECHANICAL-VOLUME	Burette, Pipette, Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights E1 Class & Balance Resolution : 0.1 mg and Distilled Water by Gravimetric Method as per ISO 4787	> 50 ml to 100 ml	0.65µl
107	MECHANICAL-VOLUME	Burette, Pipette, Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights E1 Class & Balance Resolution : 0.01 mg and Distilled Water by Gravimetric Method as per ISO 4787	1 ml to 20 ml	0.2µl
108	MECHANICAL-VOLUME	Measuring Cylinder, Volumetric Flask, Beaker	Using Standard Weights F1 Class & Balance Resolution: 100 mg and Distilled Water by Gravimetric Method as per ISO 4787	> 2 l to 10 l	0.14ml



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 22 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
109	MECHANICAL-VOLUME	Piston operated volumetric apparatus- Pipette/Micropipette/Dispenser	Using Standard Weights E1 Class & Balance Resolution : 0.01 mg and Distilled Water by Gravimetric Method as per ISO 8655	10 µl to 1000 µl	0.2µl
110	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability : 10 g, Accuracy class III and coarser	Using Standard Weights F1 and M1 Class as per OIML R-76-1	> 60 kg to 120 kg	8.32g
111	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability : 10 mg, Accuracy class II and coarser	Using Standard Weights F1 Class as per OIML R-76-1	>600 g to 1 kg	13mg
112	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability : 1g, Accuracy class III and coarser	Using Standard Weights F1 Class as per OIML R-76-1	> 5 kg to 60 kg	1.11g
113	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.0001 mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIML R-76-1	0 to 5 g	0.007mg
114	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.001 mg, Accuracy Class I and coarser	Using Standard Weights of E1 Class as per OIML R-76-1	>5 g to 22 g	0.01mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	23 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
115	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.01 mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIML R-76-1	>120 g to 220 g	0.05mg
116	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.01 mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIML R-76-1	>22 g to 120 g	0.03mg
117	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 1 mg, Accuracy class II and coarser	Using Standard Weights of E1 Class as per OIML R-76-1	> 220 g to 600 g	1mg
118	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 100 mg, Accuracy class II and coarser	Using Standard Weights of F1 Class as per OIML R-76-1	>1 kg to 10 kg	100mg
119	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 200 mg, Accuracy class II and coarser	Using Standard Weights of F1 Class as per OIML R-76-1	>10 kg to 20 kg	200mg
120	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	1 g	0.02mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	24 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
121	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	10 g	0.03mg
122	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.1 mg) by Substitution ABBA Method as per OIML R-111	100 g	0.12mg
123	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	2 g	0.02mg
124	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	20 g	0.05mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	25 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
125	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.1 mg) by Substitution ABBA Method as per OIML R-111	200 g	0.12mg
126	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01mg) by Substitution ABBA Method as per OIML R-111	200 mg	0.02mg
127	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	5 g	0.02mg
128	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	50 g	0.1mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	26 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
129	MECHANICAL-WEIGHTS	Conventional Mass F1 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	500 mg	0.02mg
130	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	1 mg	0.01mg
131	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	10 mg	0.01mg
132	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	100 mg	0.02mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	27 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
133	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	2 mg	0.01mg
134	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 class & Balance (readability: 0.01 mg) by Substitution ABBA Method as per OIML R-111	20 mg	0.01 mg
135	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	5 mg	0.01mg
136	MECHANICAL-WEIGHTS	Conventional Mass F2 accuracy class and coarser	Using Standard Weights E1 Class & Balance (readability 0.01 mg) by Substitution ABBA Method as per OIML R-111	50 mg	0.02mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	28 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
137	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 10 mg) by Substitution ABA Method as per OIML R-111	1 kg	12mg
138	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 100 mg) by Substitution ABA Method as per OIML R-111	5 kg	82mg
139	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 100 mg) by Substitution ABA Method as per OIML R-111	10 kg	100mg
140	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 10 mg) by Substitution ABA Method as per OIML R-111	2 kg	12mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 29 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
141	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 100 mg) by Substitution ABA Method as per OIML R-111	20 kg	200mg
142	MECHANICAL-WEIGHTS	Conventional Mass M1 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 1 mg) by Substitution ABA Method as per OIML R-111	500 g	2mg
143	MECHANICAL-WEIGHTS	Conventional Mass M3 accuracy class and coarser	Using Standard Weights F1 Class & Balance (readability 5 g) by Substitution ABA Method as per OIML R-111	50 kg	4.1g
144	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Flow	Using Gas flow Analyser by Direct method	2 lpm to 50 lpm	0.4 lpm to 1.5 lpm
145	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Oxygen	Using Gas flow Analyser by Direct method	20 % to 100 %	2.9 % to 3.1 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 30 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
146	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Pressure (PEEP)	Using Gas Flow Analyser by Direct Method	0 cmH2O to 30 cmH2O	1.7 %
147	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Respiration rate	Using Gas Flow Analyser by Direct method	10 brpm to 100 brpm	3.3 brpm
148	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Volume	Using Gas Flow Analyser by Direct Method	10 ml to 100 ml	1.1 ml to 20.3 ml
149	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BiPAP - Pressure	Using Gas Flow Analyser by Direct Method	0 cmH2O to 145 cmH2O	1.7% to 0.6 %
150	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Boyles Apparatus- Pressure	Using Pressure Calibrator by Direct Method	0 mmHg to 4875.4 mmHg	2.2 % to 0.4 %
151	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BP Apparatus (Sphygmomanometer) - Leak Test	Using Vital Sign Simulator by Direct Method	0 mmHg to 15 mHg	1.1 mmHg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	31 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
152	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BP Apparatus (Sphygmomanometer) - NIBP	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	1.3 mmHg to 2.9 mmHg
153	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	CPAP - Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 15 lpm	0.05 lpm to 0.5 lpm
154	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	CPAP - Pressure	Using Gas Flow Analyser by Direct Method	4 cmH ₂ O to 20 cmH ₂ O	1.7 % to 1.2 %
155	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia machine/ Syringe Pump/ Infusion Pump/ Suction Pump/ Pulse oxymeter/ BP Apparatus/ CPAP/ BiPAP/ Nebulizer)- Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 32 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
156	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia Machine/ Syringe Pump/Infusion Pump/ Suction Pump/ Pulse oxymeter/ BP Apparatus/ CPAP/BiPAP/ Nebulizer)- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
157	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia Machine/ Syringe Pump/Infusion Pump/Suction Pump/Pulse oxymeter/BP Apparatus/CPAP/BiPAP/Nebulizer)- Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.36 ohm
158	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Enteral Feeding Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 987 ml/hr	1.5 % to 1.3 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	33 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
159	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Flow meter with Humidifier- Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 50 lpm	0.4 lpm to 1.5 lpm
160	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 987 ml/hr	1.5 % to 1.3 %
161	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Occlusion	Using Infusion Device Analyser by Direct Method	0 psi to 43 psi	0.6 psi
162	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Volume	Using Infusion Device Analyser by Direct Method	1 ml to 400 ml	1.3 % to 1.2 %
163	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Nebulizer (Electric) - Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 8 lpm	0.4 lpm to 1.5 lpm
164	MEDICAL DEVICES- DISCHARGE EQUIPMENT/DEVICES	Pressure Gauge of Oxygen Cylinder - Pressure	Using Pressure Calibrator by Direct Method	0 mmHg to 4875.4 mmHg	2.2 % to 0.4 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 34 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
165	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Pulse Oxymeter - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
166	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Pulse Oxymeter - SpO2	Using Vital Sign Simulator by Direct Method	70 % to 100 %	7.9 % to 6.5 %
167	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Suction Pump-Pressure (Vacuum)	Using Pressure and Vacuum Calibrator by Direct Method	(-) 673 mmHg to 0 mmHg	0.4 % to 1.3 %
168	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 600 ml/hr	1.5 % to 1.3 %
169	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Occlusion	Using Infusion Device Analyser by Direct Method	0 psi to 20 psi	0.6 psi
170	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Volume	Using Infusion Device Analyser by Direct Method	10 ml to 50 ml	1.5 % to 1.3 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 35 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
171	MEDICAL DEVICES-IMAGING/PLOTTERS	ECG - Amplitude	Using Vital Sign Simulator by Direct Method	1 mV to 3 mV	0.1 mV to 0.14 mV
172	MEDICAL DEVICES-IMAGING/PLOTTERS	ECG - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
173	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
174	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-- Patient Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA
175	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 36 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
176	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
177	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.37 ohm
178	MEDICAL DEVICES-IMAGING/PLOTTERS	Endoscopy Unit, OT Light, Examination Light, Slit Lamp, Trans Illumination - Light Source	Using Lux Meter by Direct Method	100 Lux to 9990 Lux	6.1 %
179	MEDICAL DEVICES-IMAGING/PLOTTERS	Fetal Heart/Fetal Doppler - Heart Rate	Using Fetal Heart Simulator by Direct Method	30 bpm to 240 bpm	4.8 bpm to 14.7 bpm
180	MEDICAL DEVICES-MONITORING UNIT	Apnea Monitors - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 37 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
181	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)--Patient leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
182	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2430

Page No

38 of 76

Validity

13/12/2022 to 12/12/2024

Last Amended on

18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
183	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-- Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.37 ohm
184	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	39 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
185	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
186	MEDICAL DEVICES-MONITORING UNIT	Hematology Analyser-Centrifuge	Using tachometer by comparison method	12 rpm to 25000 rpm	5 % to 0.03 %
187	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
188	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - NIBP (Dynamic)	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	2.9 mmHg
189	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - NIBP Leak Test	Using Vital Sign Simulator by Direct Method	0 mmHg to 15 mmHg	1.1 mmHg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 40 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
190	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Respiration Rate	Using Vital Sign Simulator by Direct Method	15 brpm to 100 brpm	7.5 brpm
191	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Temperature	Using Vital Sign Simulator by Direct Method	32 °C to 42 °C	1.6 °C
192	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Clinical Thermometer	Using RTD with indicator by Direct Method	35 °C to 42 °C	1.2 °C
193	MEDICAL DEVICES-MONITORING UNIT	Weighing Scale (Readability 10g, Accuracy class III and coarser)	Using Standard Weights of F1 class as per OIML R-76-1	20 kg to 150 kg	6 g
194	MEDICAL DEVICES-MONITORING UNIT	Weighing Scale- Baby balance (Readability 5g Accuracy class III and coarser)	Using Standard Weights E2 and F1 class as per OIML R76-1	200 g to 20 kg	3 g
195	MEDICAL DEVICES-PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Charge Time	Using Defibrillator Analyser by Direct Method	1.8 s to 10 s	0.2 s



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2430

Page No

41 of 76

Validity

13/12/2022 to 12/12/2024

Last Amended on

18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
196	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Heart Rate	Using Defibrillator Analyser by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
197	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Output Energy	Using Defibrillator Analyser by Direct Method	10 J to 300 J	6.7 % to 1.3 %
198	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 42 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
199	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
200	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Patient lead Leakage	Using Electrical safety Analyser by Direct Method		5.80 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 43 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
201	MEDICAL DEVICES-PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Patient Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
202	MEDICAL DEVICES-PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis, Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Ground wire resistance	Using Electrical safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.36 ohm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 44 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
203	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilat or/Dialy sis, Heart Lung, cautry Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit Insulation test (100 to 500V)	Using Electrical safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
204	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilat or/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautry Machine)- NC Chassis Leakage	Using Electrical Safety Analyser by Direct Method		5.80 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 45 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
205	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cauty Machine-SFC Chassis Leakage	Using Electrical Safety Analyser by Direct Method		5.80 %
206	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electro Surgical Unit/ Diathermy Machine/ Cauty Machine - Output Power	Using Electrosurgical Analyser by Direct Method	10 W to 300 W	1.7 W to 18.8 W
207	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electronic Tourniquet - Pressure	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	1.3 mmHg to 2.9 mmHg
208	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Horizontal/ Vertical Autoclave/ Steam Sterilizers - Temperature	Using Mini Temperature Data Logger by comparison method	15 °C to 123 °C	1.8 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :

NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard

ISO/IEC 17025:2017

Certificate Number

CC-2430

Page No

46 of 76

Validity

13/12/2022 to 12/12/2024

Last Amended on

18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
209	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Incubator/chamber - Humidity (at 25 °C)	Using Temperature and Humidity Data Logger by Direct Method	10 %RH to 90 %RH	3.00 %RH
210	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - Acoustic Test	Using Infant Incubator Analyser by Direct Method	94 dB	5.9 dB
211	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - Humidity (at 25 °C)	Using Infant Incubator Analyser by Direct Method	30 %RH to 90 %RH	4.00 %RH
212	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - skin temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C
213	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant incubator - Temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 47 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
214	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Patient Warmer, Radiant Warmer, Refrigerator - Temperature	Using Mini Temperature Data Logger and RTD with indicator by Direct Method	-20 °C to 50 °C	1.9 °C
215	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Phototherapy Unit - UV Intensity	Using Irradiance meter by Direct Method	460 microw/cm2 to 1988 microw/cm2	7.40 %
216	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - Acoustic Test	Using Infant Incubator Analyser by Direct Method	94 dB	5.9 dB
217	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - Humidity (at 25 °C)	Using Infant Incubator Analyser by Direct Method	30 %RH to 90 %RH	4.4 %RH
218	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - skin temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 48 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
219	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C
220	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Flow	Using Gas Flow Analyser by Direct Method	2 lpm to 50 lpm	0.4 lpm to 1.5 lpm
221	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Oxygen	Using Gas Flow Analyser by Direct Method	20 % to 100 %	2.9 % to 3.1 %
222	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Pressure (PEEP)	Using Gas Flow Analyser by Direct Method	0 cmH2O to 30 cmH2O	1.5 %
223	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Respiration Rate	Using Gas Flow Analyser by Direct Method	10 brpm to 100 brpm	3.3 brpm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 49 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
224	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Volume	Using Gas Flow Analyser by Direct Method	10 ml to 1000 ml	1.1 ml to 20.3 ml
225	THERMAL-SPECIFIC HEAT & HUMIDITY	Humidity Indicator With Sensor of Environmental Chamber, Humidity Chamber @ 25 °C	Using humidity indicator with sensor, single position calibration	20 %rh to 95 %rh	3.0%rh
226	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-Hygrometer, Humidity Indicator With Inbuilt or External Sensors	Using Digital Thermo-hygrometer with inbuilt sensor, Environmental Chamber by Comparison Method	5 °C to 50 °C	1.3°C
227	THERMAL-SPECIFIC HEAT & HUMIDITY	Thermo-Hygrometer, Humidity Indicator With Inbuilt or External Sensors @ 25°C	Using Digital Thermo-hygrometer with inbuilt sensor, Environmental Chamber by Comparison Method	20 %rh to 95 %rh	3.0%rh
228	THERMAL-TEMPERATURE	Oven, Chamber, Environmental Chamber, Incubator (non medical purpose only)	Using RTD sensors (minimum nine) with data logger, multiposition calibration	(-) 40 °C to 300 °C	2.8°C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 50 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
229	THERMAL-TEMPERATURE	RTD, Thermocouple With Or Without Temperature Indicator/ Data Logger/ Recorder, Temperature Gauge, Glass Thermometer, Digital Thermometer	Using PRT (PT-100) 4 wire, 6.5 Digital Multimeter, Oil Bath by comparison method	(-) 40 °C to 300 °C	0.4°C
230	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Freezer, Chamber, Oven, Liquid Bath, Dry Block	Using PRT (PT-100) 4 wire, 6.5 Digital Multimeter, Single position calibration	(-) 40 °C to 300 °C	0.40°C
231	THERMAL-TEMPERATURE	Temperature Indicator with Sensor of Oven, Chamber, Muffle Furnace, Furnace	Using R-type T/C, 6.5 Digital Multimeter, Single position calibration	300 °C to 1000 °C	2.6°C
232	THERMAL-TEMPERATURE	Thermocouples With Or Without Temperature Indicator/Data Logger/ Recorder, Temperature Gauge, Digital Thermometer	Using R-type T/C & 6.5 Digital Multimeter, Tubular Furnace by comparison method	300 °C to 1000 °C	2.4°C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 51 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
Site Facility					
1	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC High Voltage 50 Hz	Using HV Probe with Digital Multimeter by Direct Method	1 kV to 15 kV	7.5%
2	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Power (240 V 50 Hz, 1 A to 20 A , PF 0.2 to UPF)	Using Power Analyzer by Direct Method	240 W to 4.8 kW	4.2%
3	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Measure)	AC Voltage 50 Hz	Using 6.5 digit Digital Multimeter by Direct Method	1 V to 750 V	0.14%
4	ELECTRO-TECHNICAL-Alternating Current (< 1 GHz) (Source)	Inductance 1 kHz	Using Inductance Box by Direct Method	100 μH to 10 H	3.5%
5	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC High Voltage	Using HV Probe with Digital Multimeter by Direct Method	1 kV to 15 kV	6.7%



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 52 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
6	ELECTRO-TECHNICAL-DIRECT CURRENT (Measure)	DC Voltage	Using 6.5 digit Digital Multimeter by Direct Method	1 V to 1000 V	0.01%
7	ELECTRO-TECHNICAL-DIRECT CURRENT (Source)	Resistance	Using Decade Resistance Box 4 Wire By Direct Method	1 Ohm to 100 kohm	0.1%
8	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	RTD / PRT	Using Temperature Calibrator by Direct Method	(-) 200 °C to 790 °C	1.2°C
9	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple J-type	Using Temperature Calibrator by Direct Method	(-) 200 °C to 1200 °C	1.0°C
10	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple K-type	Using Temperature Calibrator by Direct Method	(-) 200 °C to 1200 °C	2.0°C
11	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple R-type	Using Temperature Calibrator by Direct Method	200 °C to 1700 °C	1.5°C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	53 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
12	ELECTRO-TECHNICAL-TEMPERATURE SIMULATION (Source)	Thermocouple S-type	Using Temperature Calibrator by Direct Method	200 °C to 1700 °C	3.5°C
13	ELECTRO-TECHNICAL-TIME & FREQUENCY (Measure)	Time Interval	Using Time Interval meter by comparison Method	10 s to 10 hr	4.2 % to 0.03 %
14	MECHANICAL-ACOUSTICS	Sound Level Meter (at 1 kHz)	Using Sound level Calibrator by Direct Method	94 dB and 114 dB	1.2dB
15	MECHANICAL-PRESSURE INDICATING DEVICES	Hydraulic Pressure- Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge and Hydraulic Pump by Comparison as per DKD R-6-1	0 bar to 600 bar	0.14% of rdg
16	MECHANICAL-PRESSURE INDICATING DEVICES	Negative Pressure - Analog & Digital Vacuum Gauges, Pressure Transducers/ Transmitters with digital pressure indicator	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	(- 0.9) bar to 0 bar	0.0059bar



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 54 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
17	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure – Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Differential Pressure Sensor and Pneumatic Pump by Comparison as per DKD R-6-1	0 to 10 mbar	0.06mbar
18	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure – Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Differential Pressure Sensor and Pneumatic Pump by Comparison as per DKD R-6-1	0 to 2.5 mbar	0.023mbar
19	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure – Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge and Pneumatic Pump by Comparison as per DKD R-6-1	0 bar to 30 bar	0.06bar



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	55 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
20	MECHANICAL-PRESSURE INDICATING DEVICES	Pneumatic Pressure - Analog & Digital Pressure Gauges, Pressure Transducers/Transmitters with digital pressure indicator, Pressure Switch	Using Digital Pressure Gauge by Comparison as per DKD R-6-1	0 to 3 bar	0.0078bar
21	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability : 10 g, Accuracy class III and coarser	Using Standard Weights F1 and M1 Class as per OIML R-76-1	> 60 kg to 120 kg	8.32g
22	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.0001mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIMLR-76-1	0 g to 5 g	0.007mg
23	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.001mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIMLR-76-1	>5 g to 22 g	0.01mg
24	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 0.01mg, Accuracy class I and coarser	Using Standard Weights of E1 Class as per OIMLR-76-1	>120 g to 220 g	0.05mg
25	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 10 mg, Accuracy class II and coarser	Using Standard Weights F1 Class as per OIML R- 76-1	>600 g to 1 kg	13mg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	56 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
26	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 100 mg, Accuracy class II and coarser	Using Standard Weights of F1 Class as per OIMLR-76-1	>1 kg to 10 kg	100mg
27	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 1g, Accuracy class III and coarser	Using Standard Weights F1 Class as per OIML R- 76-1	>20 kg to 60 kg	1.11g
28	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 1mg, Accuracy class II and coarser	Using Standard Weights of E1 Class as per OIMLR-76-1	>220 g to 600 g	1mg
29	MECHANICAL-WEIGHING SCALE AND BALANCE	Balance Readability: 200 mg, Accuracy class II and coarser	Using Standard Weights of F1 Class as per OIMLR-76-1	>10 kg to 20 kg	200mg
30	MECHANICAL-WEIGHING SCALE AND BALANCE	Weighing Balance (Readability: 0.01mg, Accuracy class I and coarser)	Using Standard Weights of E1 Class as per OIMLR-76-1	>22 g to 120 g	0.036mg
31	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Flow	Using Gas flow Analyser by Direct method	2 lpm to 50 lpm	0.4 lpm to 1.5 lpm
32	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Oxygen	Using Gas flow Analyser by Direct method	20 % to 100 %	2.9 % to 3.1 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	57 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
33	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Pressure (PEEP)	Using Gas Flow Analyser by Direct Method	0 cmH2O to 30 cmH2O	1.7 %
34	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Respiration rate	Using Gas Flow Analyser by Direct method	10 brpm to 100 brpm	3.3 brpm
35	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Anesthesia Machine - Volume	Using Gas Flow Analyser by Direct Method	10 ml to 100 ml	1.1 ml to 20.3 ml
36	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BiPAP - Pressure	Using Gas Flow Analyser by Direct Method	0 cmH2O to 145 cmH2O	1.7% to 0.6 %
37	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Boyles Apparatus- Pressure	Using Pressure Calibrator by Direct Method	0 mmHg to 4875.4 mmHg	2.2 % to 0.4 %
38	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BP Apparatus (Sphygmomanometer) - Leak Test	Using Vital Sign Simulator by Direct Method	0 mmHg to 15 mHg	1.1 mmHg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	58 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
39	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	BP Apparatus (Sphygmomanometer) - NIBP	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	1.3 mmHg to 2.9 mmHg
40	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	CPAP - Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 15 lpm	0.05 lpm to 0.5 lpm
41	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	CPAP - Pressure	Using Gas Flow Analyser by Direct Method	4 cmH ₂ O to 20 cmH ₂ O	1.7 % to 1.2 %
42	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia machine/ Syringe Pump/ Infusion Pump/ Suction Pump/ Pulse oxymeter/ BP Apparatus/ CPAP/ BiPAP/ Nebulizer)- Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 59 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
43	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia Machine/ Syringe Pump/Infusion Pump/ Suction Pump/ Pulse oxymeter/ BP Apparatus/ CPAP/BiPAP/ Nebulizer)- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
44	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Electrical Safety Test (Anesthesia Machine/ Syringe Pump/Infusion Pump/Suction Pump/Pulse oxymeter/BP Apparatus/CPAP/BiPAP/Nebulizer)- Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.36 ohm
45	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Enteral Feeding Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 987 ml/hr	1.5 % to 1.3 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 60 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
46	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Flow meter with Humidifier- Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 50 lpm	0.4 lpm to 1.5 lpm
47	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 987 ml/hr	1.5 % to 1.3 %
48	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Occlusion	Using Infusion Device Analyser by Direct Method	0 psi to 43 psi	0.6 psi
49	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Infusion Pump - Volume	Using Infusion Device Analyser by Direct Method	1 ml to 400 ml	1.3 % to 1.2 %
50	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Nebulizer (Electric) - Flow	Using Gas Flow Analyser by Direct Method	1 lpm to 8 lpm	0.4 lpm to 1.5 lpm
51	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Pressure Gauge of Oxygen Cylinder - Pressure	Using Pressure Calibrator by Direct Method	0 mmHg to 4875.4 mmHg	2.2 % to 0.4 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 61 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
52	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Pulse Oxymeter - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
53	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Pulse Oxymeter - SpO2	Using Vital Sign Simulator by Direct Method	70 % to 100 %	7.9 % to 6.5 %
54	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Suction Pump-Pressure (Vacuum)	Using Pressure and Vacuum Calibrator by Direct Method	(-) 673 mmHg to 0 mmHg	0.4 % to 1.3 %
55	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Flow	Using Infusion Device Analyser by Direct Method	10 ml/hr to 600 ml/hr	1.5 % to 1.3 %
56	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Occlusion	Using Infusion Device Analyser by Direct Method	0 psi to 20 psi	0.6 psi
57	MEDICAL DEVICES-DISCHARGE EQUIPMENT/DEVICES	Syringe Pump - Volume	Using Infusion Device Analyser by Direct Method	10 ml to 50 ml	1.5 % to 1.3 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 62 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
58	MEDICAL DEVICES-IMAGING/PLOTTERS	ECG - Amplitude	Using Vital Sign Simulator by Direct Method	1 mV to 3 mV	0.1 mV to 0.14 mV
59	MEDICAL DEVICES-IMAGING/PLOTTERS	ECG - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
60	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
61	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-- Patient Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA
62	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 63 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
63	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
64	MEDICAL DEVICES-IMAGING/PLOTTERS	Electrical Safety Test (EEG/ECG/Fetal Doppler/Trans Illuminator Light Source)-Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.37 ohm
65	MEDICAL DEVICES-IMAGING/PLOTTERS	Endoscopy Unit, OT Light, Examination Light, Slit Lamp, Trans Illumination - Light Source	Using Lux Meter by Direct Method	100 Lux to 9990 Lux	6.1 %
66	MEDICAL DEVICES-IMAGING/PLOTTERS	Fetal Heart/Fetal Doppler - Heart Rate	Using Fetal Heart Simulator by Direct Method	30 bpm to 240 bpm	4.8 bpm to 14.7 bpm
67	MEDICAL DEVICES-MONITORING UNIT	Apnea Monitors - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 64 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
68	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)--Patient leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
69	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 65 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
70	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-- Ground Wire Resistance	Using Electrical Safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.37 ohm
71	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Torniquet/Hematology Analyser)-- Insulation Test (Optional 100V to 500V)	Using Electrical Safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 66 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
72	MEDICAL DEVICES-MONITORING UNIT	Electrical Safety test (Patient Monitor/Apnea Monitor/Fetal Monitor/OT table/Electronic/Mechanical Bed/Electronic Tourniquet/Hematology Analyser)-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
73	MEDICAL DEVICES-MONITORING UNIT	Hematology Analyser-Centrifuge	Using tachometer by comparison method	12 rpm to 25000 rpm	5 % to 0.03 %
74	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Heart Rate	Using Vital Sign Simulator by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
75	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - NIBP (Dynamic)	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	2.9 mmHg
76	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - NIBP Leak Test	Using Vital Sign Simulator by Direct Method	0 mmHg to 15 mmHg	1.1 mmHg



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	CC-2430	Page No	67 of 76
Validity	13/12/2022 to 12/12/2024	Last Amended on	18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
77	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Respiration Rate	Using Vital Sign Simulator by Direct Method	15 brpm to 100 brpm	7.5 brpm
78	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Temperature	Using Vital Sign Simulator by Direct Method	32 °C to 42 °C	1.6 °C
79	MEDICAL DEVICES-MONITORING UNIT	Patient Monitors - Clinical Thermometer	Using RTD with indicator by Direct Method	35 °C to 42 °C	1.2 °C
80	MEDICAL DEVICES-MONITORING UNIT	Weighing Scale (Readability 10g, Accuracy class III and coarser)	Using Standard Weights of F1 class as per OIML R-76-1	20 kg to 150 kg	6 g
81	MEDICAL DEVICES-MONITORING UNIT	Weighing Scale- Baby balance (Readability 5g Accuracy class III and coarser)	Using Standard Weights E2 and F1 class as per OIML R76-1	200 g to 20 kg	3 g
82	MEDICAL DEVICES-PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Charge Time	Using Defibrillator Analyser by Direct Method	1.8 s to 10 s	0.2 s



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	68 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
83	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Heart Rate	Using Defibrillator Analyser by Direct Method	30 bpm to 300 bpm	4.8 bpm to 9.1 bpm
84	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Defibrillator - Output Energy	Using Defibrillator Analyser by Direct Method	10 J to 300 J	6.7 % to 1.3 %
85	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Chassis Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	69 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
86	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Earth Leakage	Using Electrical Safety Analyser by Direct Method	1 µA to 10 mA	0.14 µA to 0.6 mA
87	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Patient lead Leakage	Using Electrical safety Analyser by Direct Method		5.80 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	70 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
88	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Patient Leakage	Using Electrical Safety Analyser by Direct Method	1 μ A to 10 mA	0.14 μ A to 0.6 mA
89	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis, Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautery Machine-Ground wire resistance	Using Electrical safety Analyser by Direct Method	0.18 ohm to 1.8 ohm	0.18 ohm to 0.36 ohm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 71 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
90	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilat or/Dialy sis, Heart Lung, cautry Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit Insulation test (100 to 500V)	Using Electrical safety Analyser by Direct Method	0.7 Mohm to 100 Mohm	0.3 Mohm to 8.9 Mohm
91	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilat or/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cautry Machine)- NC Chassis Leakage	Using Electrical Safety Analyser by Direct Method		5.80 %



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 72 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
92	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electrical safety test (Incubator/Autoclave /Defibrillator/Ventilator/Dialysis machine/Heart Lung Machine/Patient, Radiant Warmer/Irradiance Meter/Phototherapy Unit/Cauty Machine-SFC Chassis Leakage	Using Electrical Safety Analyser by Direct Method		5.80 %
93	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electro Surgical Unit/ Diathermy Machine/ Cauty Machine - Output Power	Using Electrosurgical Analyser by Direct Method	10 W to 300 W	1.7 W to 18.8 W
94	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Electronic Tourniquet - Pressure	Using Vital Sign Simulator by Direct Method	35 mmHg to 255 mmHg	1.3 mmHg to 2.9 mmHg
95	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Horizontal/ Vertical Autoclave/ Steam Sterilizers - Temperature	Using Mini Temperature Data Logger by comparison method	15 °C to 123 °C	1.8 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 73 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
96	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Incubator/chamber - Humidity (at 25 °C)	Using Temperature and Humidity Data Logger by Direct Method	10 %RH to 90 %RH	3.00 %RH
97	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - Acoustic Test	Using Infant Incubator Analyser by Direct Method	94 dB	5.9 dB
98	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - Humidity (at 25 °C)	Using Infant Incubator Analyser by Direct Method	30 %RH to 90 %RH	4.00 %RH
99	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant Incubator - skin temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C
100	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Infant incubator - Temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	74 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
101	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Patient Warmer, Radiant Warmer, Refrigerator - Temperature	Using Mini Temperature Data Logger and RTD with indicator by Direct Method	-20 °C to 50 °C	1.9 °C
102	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Phototherapy Unit - UV Intensity	Using Irradiance meter by Direct Method	460 microw/cm2 to 1988 microw/cm2	7.40 %
103	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - Acoustic Test	Using Infant Incubator Analyser by Direct Method	94 dB	5.9 dB
104	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - Humidity (at 25 °C)	Using Infant Incubator Analyser by Direct Method	30 %RH to 90 %RH	4.4 %RH
105	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - skin temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name :	NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA		
Accreditation Standard	ISO/IEC 17025:2017	Page No	75 of 76
Certificate Number	CC-2430	Last Amended on	18/08/2023
Validity	13/12/2022 to 12/12/2024		

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured / Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
106	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Radiant Warmer - temperature	Using Infant Incubator Analyser by Direct Method	30 °C to 45 °C	1 °C
107	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Flow	Using Gas Flow Analyser by Direct Method	2 lpm to 50 lpm	0.4 lpm to 1.5 lpm
108	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Oxygen	Using Gas Flow Analyser by Direct Method	20 % to 100 %	2.9 % to 3.1 %
109	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Pressure (PEEP)	Using Gas Flow Analyser by Direct Method	0 cmH2O to 30 cmH2O	1.5 %
110	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Respiration Rate	Using Gas Flow Analyser by Direct Method	10 brpm to 100 brpm	3.3 brpm



National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : NATIONAL RESEARCH AND TECHNOLOGY CONSORTIUM (C-ACT), DEPARTMENT OF INDUSTRIES COMPLEX, SECTOR-1, PARWANOO, SOLAN, HIMACHAL PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number CC-2430 **Page No** 76 of 76

Validity 13/12/2022 to 12/12/2024 **Last Amended on** 18/08/2023

S.No	Discipline / Group	Measurand or Reference Material/Type of instrument or material to be calibrated or measured / Quantity Measured /Instrument	Calibration or Measurement Method or procedure	Measurement range and additional parameters where applicable(Range and Frequency)	* Calibration and Measurement Capability(CMC)(±)
111	MEDICAL DEVICES- PATIENT CONDITIONING / MAINTENANCE	Ventilator - Volume	Using Gas Flow Analyser by Direct Method	10 ml to 1000 ml	1.1 ml to 20.3 ml
112	THERMAL- SPECIFIC HEAT & HUMIDITY	Humidity Indicator With Sensor of Environmental Chamber, Humidity Chamber @ 25 °C	Using humidity indicator with sensor, single position calibration	20 %rh to 95 %rh	3.0%rh
113	THERMAL- TEMPERATURE	Oven, Chamber, Environmental Chamber, Incubator (non medical purpose only)	Using RTD sensors (minimum nine) with data logger, multiposition calibration	(-) 40 °C to 300 °C	2.8°C
114	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Freezer, Chamber, Oven, Liquid Bath, Dry Block	Using PRT (PT-100) 4 wire, 6.5 Digital Multimeter, Single position calibration	(-) 40 °C to 300 °C	0.40°C
115	THERMAL- TEMPERATURE	Temperature Indicator with Sensor of Oven, Chamber, Muffle Furnace, Furnace	Using R-type T/C, 6.5 Digital Multimeter, Single position calibration	300 °C to 1000 °C	2.6°C

* CMCs represent expanded uncertainties expressed at approximately the 95% level of confidence, using a coverage factor of k = 2.