

CSIR-NATIONAL PHYSICAL LABORATORY
PROCUREMENT PLAN

(*Please read the note given at the end)

A	FOR THE FINANCIAL YEAR 2025-26
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A (a)	EQUIPMENT
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(i)	Equipment: Out of CSIR Infra Grant
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Sr. No.	Name Category of Equipment/ Vehicle Item	Quantity (Nos.)	Approximate Cost (Rs. In Lakhs)
1	Surface roughness measurement Instrument	1	10.00
2	Oil less Sound Proof Air Compressor with Accessories	1	5.00
3	Mass Flow meter for Low Liquid Flow system	2	10.00
4	AC/DC standard Resistor - 10 ohm	1	7.00
5	1 micro H Inductor	1	8.00
6	AC Kilo Voltmeter Up to 100 kV with AC Frequency Range Upto 1 kHz	1	5.00
7	DC power supply for magnetron sputtering Unit with following specifications: Output voltage: up to 1200 V (from 50 V); Output current: up to 1200 mA (from 1 mA); Output Power: up to 600 W (from 1 W); Switch mode: 3 outputs for magnetrons	1	5.70
8	Water Chiller, Capcity : 30 Ton	1	25.00
9	Portable helium leak detector	1	6.00
10	A system with constant flow and multichannel particle collection holders (customised)	1	10.00
11	One set of Pyranometer, UV Radiometer	1	12.82
12	Workstation with, Linux OS	1	5.00
13	fabrication f Cylinder Lifting & Movement System	2	6.43
14	Precise DC Magnetron Power Supply of 600 W Capacity	1	5.75
15	Gas Chromatograph with Helium Ionization Detector	1	50.00
16	Radon Gas Sniffer/ Logger/ Dosimeter	1	12.00
17	Work station with Crystal XE Upgrade	1	10.20
18	Dry Scroll Vacuum Pump	1	11.50
19	Infrasonic Sensor with Accessories and data Analysis	1	45.00
20	Seeback Instrument	1	10.00
21	Hydrogen Generator	1	8.00
22	Mass Flow Controller	3	5.00
23	Centrifuge	1	5.00

24	Micro Aethlometer	1	7.00
25	Waveform Generator	1	6.00
26	RF Millivoltmeter and Probe Kits along with required accessories	1	13.00
27	Automatic Viscometer	1	25.00
28	Gas Chromatograph with Helium Ionization Detector	1	80.00
29	Ac's Split/windows	50	30.00
30	Zero Air Generator	1	5.00
31	3 axis carbon felt making needle punch machine	1	12.50
32	Control console assy UK	1	8.80
33	High performance DC Power Supply	2	10.00
34	Spark Plasma Sintering (SPS)	1	150.00
35	Power Amplifier	1	5.00
36	300 kV AC High voltage ratio measurement system with accessories	1	410.00
37	DC power supply with capacity of 600 W for magnetron sputtering system	1	5.80
38	Beam profiler	1	8.00
39	Temperature controller	1	7.00
40	Temperature sensors (Thermister/SPRT) and read out	1	8.00
41	Heater Peltier and accessories	1	10.00
42	CMOS Camera for NIR wavelength	1	14.00
43	Thermal conductivity instrument	1	125.00
44	Multi function calibrator	1	27.00

(ii)

Equipment Less than 5 Lakhs

Sr. No	Out of CSIR Infra Grant	Out of CSIR Funded Projects	Out of Externally Funded Project (EFP)	Total (Rs. In Lakhs)
	163.63	22.80	26.56	212.99

(iii)

Equipment: Out of CSIR Funded Projects

Sr. No	Name Category of Equipment/ Vehicle Item	Quantity (Nos.)	Project Number/ Code	Approximate Cost (Rs. In Lakhs)
1	Hygrometer	1	FTT 070507	5.00
2	Dual Frequency Comb Based THz Comb	1	MMP 015201	1014.00
3	Signal Generator with power (built in or additional) amplifier (D band, 110GHz-170GHz) with vector software	1	MMP 015201	250.00
4	Data server	1	FBR 010307	9.50
5	Moku.Pro for AMR Sensors	2	MMP 015203	22.153
6	Force comparator with coil	1	HCP 55	240.00
7	Permanent Magnet system	1	HCP 55	270.00
8	Optics, Laser (primary realization	4 sets	HCP 55	200.00

	option) + Laser Interferometer measurement system			
9	Vacuum system, Translation Stages, Mechanics	1	HCP 55	90.00
10	Sensors and control electronics	1 Set	HCP 55	30.00
11	Precision voltmeters	4	HCP 55	40.00
12	Programmable current sources	4	HCP 55	30.00
13	15 t crane and other accessories.	1	HCP 55	30.00
14	High precision resistors with air bath	1	HCP 55	25.00
15	work station (one)	1	HCP 55	8.00
16	Creation of laboratory with precision mounting and environment control system	1	HCP 55	80.00
17	Low noise current source	1	HCP 55	6.00
18	Nano-voltmeter	1	HCP 55	19.00
19	SPRTs (Capsule and Long-Stem)	2, 2	HCP 55	20.00
20	¼ inch Microphones (08 nos) and Loudspeakers (04 nos) 1-100 kHz	4	HCP 55	20.00
21	Pre-amplifiers (05 nos)	5	HCP 55	10.00
22	Actuator Supply (05 nos)	5	HCP 55	10.00
23	Acoustic Analyzer (two channel), 1-100 kHz	1	HCP 55	15.00
24	Waveform generator (100 kHz) and DAQ	1	HCP 55	10.00
25	Microwave Probes (08 nos) – Specially developed	8	HCP 55	8.00
26	Vector Network Analyzer (up to 40 GHz)	1	HCP 55	45.00
27	Fabrication of copper cylindrical resonator, pressure vessel and assembly	1	HCP 55	35.00
28	Digital pressure indicator	2	HCP 55	14.00
29	Cartridge Heaters at resonator-pressure vessel and RTDs	2, 2	HCP 55	5.00
30	High precision digital thermometer	1	HCP 55	35.00
31	10 MHz frequency counter	1	HCP 55	5.00
32	Data acquisition IEEE GPIB cables and Labview software and DAQs	1 set	HCP 55	10.00
33	Lock-in-amplifier	1	HCP 55	15.00
34	LN2 circulator bath	1	HCP 55	30.00
35	Low temperature circulating bath (-80 °C)	1	HCP 55	30.00
36	T.P. of Argon with realization apparatus	1	HCP 55	35.00
37	Furnace for Cylindrical cavity resonator (1000 oC)	1	HCP 55	30.00
38	High temperature blackbody fixed points with furnace up to 3000 oC	1	HCP 55	100.00
39	Linear Spectral Pyrometer/Filter radiometer	1	HCP 55	70.00
40	Vibration free optical table and mounting accessories	2	HCP 55	10.00
41	81/2 DMM	1	HCP 55	20.00
42	(2P-2T Humidity Generator and Dew Point Hygrometer)	1	HCP 55	250.00
43	Equipment for Digital SI	4	HCP 55	200.00
44	UHV Deposition Chamber	1	HCP 55	170.00

45	Cryogen-free ultra-low noise cryostat in the temperature range 2-300K equipped with superconducting magnet, dual voltage and current biasing module, capabilities to rf coupling	1	HCP 55	450.00
46	Quantum Transport measurement system: Ultra-low noise electronics setup for quantum transport measurements (Lock-in amplifiers, current preamplifiers, SMUs, DC voltage source, spectrum analyzer, low current measurement unit, nanovoltmeter, temperature controller, ultra-low noise current amplifiers (ULCA) etc.)	1	HCP 55	80.00
47	Electro Optic Modulators	3	HCP 55	15.00
48	RF Drives and Amplifiers	3	HCP 55	15.00
49	Acousto-optic modulators	4	HCP 55	10.00
50	Vacuum Pumps, gauges & accessories	2	HCP 55	12.00
51	Frequency synthesizer/Function generator	4	HCP 55	10.00
52	Clock Laser with ULE cavity with accessories	1	HCP 55	450.00
53	PMT detector	1	HCP 55	10.00
54	CCD/CMOS camera	1	HCP 55	5.00
55	Fast Photodiode	1	HCP 55	5.00
56	Nominal and small/minor equipment electrical, optical & fiber	1	HCP 55	25.00
57	Gaussmeter/Teslameter	1	HCP 55	12.00
58	Power/Energy meter	3	HCP 55	5.00
59	Optical isolator	4	HCP 55	15.00
60	Oscilloscopes	3	HCP 55	7.00
61	DC power supplies	2	HCP 55	5.00
62	Beam profiler	1	HCP 55	5.00
63	Laser and Wavemeter	1	HCP 55	75.00
64	Time Tagger	1	HCP 55	18.00
65	ECDL Laser Systems (one laser diode and one laser diode with amplifier) with frequency stabilization control electronics and associated accessories for Primary Frequency Standard	1	HCP 55	90.00
66	Wavelength meter with switch	1	HCP 55	100.00
67	RF spectrum analyzer upto 13.7 GHz	1	HCP 55	20.00
68	Turbo molecular pump	1	HCP 55	20.00
69	Microwave Cavities	2	HCP 55	35.00
70	IR Viewer	1	HCP 55	10.00
71	CCD Camera	1	HCP 55	10.00
72	Power meter for upto 4 W power	1	HCP 55	5.00
73	Mixed domain oscilloscope	1	HCP 55	10.00
74	Tunable microwave synthesizer	1	HCP 55	15.00
75	Fabry-Perot Interferometer	1	HCP 55	5.00
76	Regulated DC Power Supplies	4	HCP 55	10.00

77	Workstations	1	HCP 55	7.00
78	Function generator	2	HCP 55	5.00
79	Environment monitors	2	HCP 55	10.00
80	Data logger	1	HCP 55	5.00
81	Data Acquisition Cards with labview software	2	HCP 55	10.00
82	Shutters	6	HCP 55	10.00
83	Vacuum-air transfer system (Vacuum chamber/container, pumps, gauges, etc.) (1 No.)	1	HCP 55	50.00
84	Weighing balances (1Nos.)	1	HCP 55	50.00
85	Volume/density measurement system (1 No.)	1	HCP 55	70.00
86	Standards weights – 1 kg, E0/E1 class (4 Nos.)	4	HCP 55	25.00
87	Standards weights – 1 mg to 50 kg, E0/E1 class (1sets)	1	HCP 55	35.00
88	Roundness machine - non-contact (1 No.)	1	HCP 55	150.00
89	Length Measuring Machine (1 No.)	1	HCP 55	60.00
90	Laser Interferometer (Pico Meter Distance Measurement) (1 No.)	1	HCP 55	60.00
91	CCD/CMoS camera (5 No.)	5	HCP 55	10.00
92	Powder X-ray diffractometer (1 No.)	1	HCP 55	175.00
93	Environmental monitoring system (data logger) (6 Nos.)	6	HCP 55	10.00
94	Minor equipments (DC Power Supply, Jigs and Fixtures for holding the Si sphere, etc)	1	HCP 55	10.00
95	QHRs System comprising of; (i) 12T Superconducting Magnet (solenoid based) with bipolar programmable magnet power supply (ii) Variable temperature insert having 12 pin TO8 holder with compatible temperature sensors and complete wiring for doing magneto transport measurement (iii) Provision for VTI (i.e. sample) to be align parallel as well perpendicular to magnetic field. (iv) Compatible cryogenic temperature controller , LHe level sensor, (v) DCC resistance bridge with 4 channel matrix scanner Dry scroll pump to achieve 1.3 K at sample	1	HCP 55	500.00
96	QHR Devices (i) GaAs/AlGaAs based and (II) Graphene based	1 each	HCP 55	50.00
97	Integrated Confocal Raman spectroscopy/micro-Raman Mapping - Multimode AFM system with accessories	1	HCP 55	250.00
98	Cryogenic Current Comparator (CCC) bridge/electronics for the highest precision measurement of resistance ratios at different	1	HCP 55	150.00

	levels from 1 Ohm to 1 MOhm			
99	Source measuring Units, Current sources and Nanovoltmeter	1 each	HCP 55	10.00
100	Closed Cycle Refrigerator (CCR, 4.2 K-350 K)	1	HCP 55	35.00
101	Turbo molecular pump with backing pump	2	HCP 55	20.00
102	Two wavelength/Dual colour infrared optical pyrometer capable of measuring temperatures $\geq 2000^{\circ}\text{C}$ with interfacing kit	1	HCP 55	10.00
103	Throttle valve with controller	1	HCP 55	10.00
104	Thermally Stabilized Travelling Resistance Standards (1 - 1 MOhm)	1 each (total 6)	HCP 55	30.00
105	PRT thermometer with digital readout	2	HCP 55	10.00
106	High Precision Dual Channel Thermo-Hygrometer/ logger	2	HCP 55	5.00
107	JAWS chip Standalone 2V	1	HCP 55	50.00
108	Compatible Probe	1	HCP 55	20.00
109	Liquid Helium Dewar	1	HCP 55	20.00
110	Waveform Generator 30 MHz	1	HCP 55	5.00
111	High Speed Arbitrary Waveform Generators	1	HCP 55	18.00
112	2 Channel Broadband 50 GHz Modulator Driver/RF Amplifier	1	HCP 55	14.00
113	High Speed Counter Control AWG 4-channel isolated, prog. amplifier	1	HCP 55	10.00
114	Broadband Digitiser with high sampling rate	1	HCP 55	14.00
115	Thermal Transfer Standard	1	HCP 55	70.00
116	AC voltmeter	1	HCP 55	25.00
117	Cryocooler	1	HCP 55	20.00
118	AC/DC QHE devices and the electronics associated with them	6	HCP 55	50.00
119	UPS with Isolation Transformer, 30 kVA	1	HCP 55	10.00
120	Data Acquisition/PXI Cards	4	HCP 55	30.00
121	High Precision Impedance (R /L/C) standards	4	HCP 55	30.00
122	Electron beam lithography (EBL) equipment	1	HCP 55	965.00
123	Inductively coupled plasma reactive ion etching (ICP-RIE) equipment	1	HCP 55	600.00
124	Source meter	1	IST 552502	10.00
125	Current pre-amplifier	1	IST 552502	5.00
126	Mini sputtering system	1	MLP 252032	18.00
127	Optical Microscope	1	MLP 252032	8.30
128	Nitrogen generator	1	MLP 252032	17.50
129	30KVA UPS	1	MLP 252032	6.20

(iv)

Equipment: Out of Externally Funded Projects (EFP)

Sr. No	Name Category of	Quantity	Project	Approximate
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	Equipment/ Vehicle Item	(Nos.)	Number/ Code	Cost (Rs. In Lakhs)
1	Aerosol Particle Spectrometer (APS) with Counter	1	GAP 181132	160.00
2	Electrical Low Pressure Impactor Sampler	1	GAP 181132	30.00
3	Gas Leak Detection system/ sensor	2	GAP 181132	10.00
4	Gas Management System	1	GAP 181132	27.00
5	Furniture (computer table, Chair, Working table)		GAP 181132	50.00
6	AC (2 ton)	4	GAP 181132	6.00
7	Replacement of Outdoor unit centralised Lab AC system	1	GAP 181132	20.00
8	Laser interferometer (Including all below items)	5	TSP 231232	310.00
9	Mechanical Bed*	6	TSP 231232	110.00
10	Microscopic High Resolution Camera and related accessories	5	TSP 231232	5.00
11	Laptop / Desktop / laser printer with Dual Monitor	5	TSP 231232	5.00
12	Dry Vacuum Pump 90L	1	GAP 230932	11.00
13	Mass comparator, 200 g, 1 micro gram	1	GAP 240232	70.00
14	Rheometer	1	GAP 240232	65.00
15	Viscometer	1	GAP 240232	50.00
16	Mass compactor, 1 kg, 1 micro gram	1	GAP 240232	90.00
17	Gear Tester	1	GAP 240232	350.00
18	Absolute gravimeter	1	GAP 240232	530.00
19	Refractive index testing machine	1	GAP 240232	20.00
20	Guarded hot plate apparatus	1	GAP 240232	395.00
21	Moisture analyzer with forced convection oven	1	GAP 240232	30.00
22	Water vapour permeability analyzer	1	GAP 240232	15.00
23	Clinical thermometer testing apparatus	1	GAP 240232	40.00
24	Thermal humidity cycling chamber	1	GAP 240232	50.00
25	Radiant Heat Flux Sensing Apparatus Sensing	1	GAP 240232	50.00
26	Illuminance/Luminous Intensity Measurement Apparatus	1	GAP 240232	80.00
27	Power Supply (AC)	2	GAP 240232	15.00
28	Photo Current meter	1	GAP 240232	35.00
29	Luminance Meter	1	GAP 240232	30.00
30	Power analyzer	2	GAP 240232	8.00
31	Brinell Hardness Machine	1	GAP 240232	120.00
32	Balance for Low Force Measurement	1	GAP 240232	12.00
33	Fiber Bragg Grating Force Sensor with interrogator	1	GAP 240232	30.00
34	Linear Encoder	1	GAP 240232	10.00
35	5 MN Force Machine	1	GAP 240232	900.00
36	Ultrasonic Pulse Velocity Tester with suitable transducers	1	GAP 240232	15.00

37	Acoustic emission testing Apparatus	1	GAP 240232	49.00
38	Phased array Ultrasonic Flow Detector	1	GAP 240232	30.00
39	Up-gradalio of Microphone Calibration Facility using Insert Voltage method in range 20 Hz to 25 kHz	1	GAP 240232	50.00
40	Up-gradation of Acoustic Free-Field Calibration and Testing Apparatus	1	GAP 240232	180.00
41	Up-gradation of Reverberation Chamber and Testing equipment for acoustical materials	1	GAP 240232	130.00
42	Development of PVTt (Primary gas flow standard)	1	GAP 240232	300.00
43	High stability liquid temperature bath	6 nos.	TSP 231032	150.00
44	SPRT	6	TSP 231032	38.00
45	Precision Temperature Indicator	6	TSP 231032	24.00
46	Centrifuge System with accessories	6	TSP 231032	12.00
47	Reading Telescope, digital Camera with display and mounting accessories	6	TSP 231032	6.00
48	Computer, Monitor, Laser Printer, UPS and accessories	6	TSP 231032	8.50
49	Multichannel data logger with 12 PRT PT-100	1 set	TSP 231032	20.00
50	Digital Thermo Hygrometer	6	TSP 231032	9.60
51	Ice Flakes Machine with accessories	1	TSP 231032	5.00
52	Climatic Chamber for environment test	7	TSP 231032	35.00
53	Ga and In blackbody fixed points with furnace	1	TSP 231032	27.00
54	Climatic chamber	6	TSP 231132	60.00
55	Workstation	1	TSP 231132	7.00
56	Pressure regulator	7	TSP 231132	6.00
57	Pressure and temperature control system	1	TSP 231132	20.00
58	Pressure sensors	7	TSP 231132	6.50
59	Computer with PCI express slot & peripherals like key board, mouse and monitor or latest in build system	7	TSP 231132	7.20
60	DAQ Card	7	TSP 231132	8.00
61	FRM sampler	2	GAP 181132	2.00
62	Portable half rack with UPS and batteries system	1	GAP 231032	5.00
63	NaVIC reference receiver	1	GAP 231032	20.00
64	Atomic Frequency Standard	1	GAP 231032	140.00
65	Workstation	1	GAP 250432	12.00
66	Gas Sensor Testing facility	1	GAP 250332	1150.00
67	Charpy and hardness tester	1	GAP 180932	235.00
68	System for primary pH	1	GAP 180932	230.00
69	XRF instrument	1	GAP 180932	230.00

70	CHNS analyser	1	GAP 180932	57.00
71	Turbo Molecular Pump with Pumping Speed of 260 l/s along with all required accessories like, Oil free scroll pump, Full Range Gauge Cold Cathode, connecting cables and relevant adapters to connect to the vacuum chamber	1	GAP 250132	17.60

A (b)	CONSUMABLES
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Sr. No.	Category	Expected Procurement Value (Rs. In Lakhs)			
		Out of CSIR Infra Grant	Out of CSIR Funded Projects	Out of Externally Funded Project (EFP)	Total (Rs. In Lakhs)
1	Glassware	1.00		1.30	2.30
2	Miscellaneous	124.87	35.13	63.73	223.73
3	Research &Development Accessories (R & D Consumable)	147.27	244.29	62.05	453.61
4	Electrical & Electronic Items	21.85	6.39	119.92	148.16
5	Computer Accessories	3.93	1.80	1.81	7.54
6	Cartridge	9.69	0.20	0.30	10.19
7	Software	17.15	34.50	11.10	62.75
8	Stationary	0.10	1.68	1.24	3.02
9	Chemical (Gases)	47.00	61.65	101.86	210.51
10	Chemical (Solid)	46.65	14.00	3.94	64.59
11	Batteries	1.21	1.50		2.71
12	Job Work (Repair)	120.18	43.39	35.42	198.99
13	Annual Maintenance Contract (AMC)	29.17	14.00		43.17
14	Furniture		2.00		2.00

B	FOR NEXT 2-4 FINANCIAL YEARS (2025-29) (From 01/04/2025 to 31/03/2029)
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B (a)	EQUIPMENT
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Sr. No.	Name of Equipment / Item	Quantity (Nos.)	Approximate Cost (Rs. In Lakhs)
1	Liquid Nitrogen Pump Controller with accessories etc	1	5.00
2	Turbo Molecular Pump	1	7.00
3	Portable VOCs Monitor	1	7.00
4	Battery operated high volume air sampling pump along with PM2.5 impactor and Personal Cascade Impactor	1	10.00
5	FLIR Camera	1	10.00
6	GNSSS reciever with Ionosphere	1	12.00

	Scintillation Monitor		
7	Ozone Transfer Standard (Ozone transfer standard for the calibration of ozone analyzers)	1	15.00
8	Riometer	1	20.00
9	Ceilometer	1	50.00
10	All sky (Airglow) Imager	1	80.00
11	Ionosphere - All Sky Imager	1	100.00
12	SKiYMET (all Sky interferometric METeor) radar	1	100.00
13	GC Mass Spectrometer with gas inlets	1	100.00

B (b)	CONSUMABLES
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Sr. No.	Category	Expected Procurement Value (Rs. In Lakhs)
1	R&D Consumables for closed loop systems (by equipment name)	
2	Chemicals (ex.- Name the different chemicals like Solvents, Biochemical/s, Biochemical kits & enzymes, Diagnostic kits, Sequencing, Oligonucleotides, etc.)	
3	Other Consumables (ex- Insecticide, Raw Materials, Packing Material, Column, Syringes, Transcriptome and Metagenome Analysis, Metabolites analyses, Farm Consumables, TLC Plates, Filter papers, Planting materials, seeds, Chemical standards, Essential oils, Standard aroma molecules, Animal feed, Cell Lines, Agriculture accessories, etc.)	
4	Glass wares (ex- name the different glass wares)	
5	Plastic wares (ex- Name the different plastic wares)	
6	Toner Cartridges.	
7	Batteries, etc.	
8	Gases (ex- tentative names)	
9	Maintenance/AMC/repairing of existing equipment	
10	Stationery items (ex- name a few)	
11	IT / software-related Items (Name the items required during year)	
12	Furniture (Name the items required during year)	
13	Electric Items (Name the items required during year)	

Note:

- The above procurement plan is dynamic and could be revised as often as may be necessary with the approval of the Competent Authority.
- The procurement of the chemicals & consumables would be based on the need and ongoing requirement of R&D activities of Lab/Instt.
- The procurement is subject to the fund’s availability/release of sufficient grant from CSIR / funding agency.
- The indicated procurement value is an estimate only.

