

Procurement Plan for BCCD in FY2023-24

Sl. No.	Name of the equipment(s)
1	Digital Microscope Color Camera
2	Real-Time PCR System with Benchtop Polymerase chain reaction thermal cycler equipment
3	Precise low-temperature controllable Muffle furnace (up to 1000 degreeC)
4	Pyrolysis furnace (upto 1200 degreeC)
5	ANSYS Academic Mechanical + CFD , Single user Perpetual license with 1 year AMC Research License
6	Solidworks, Single user Standard Perpetual license with 1 year AMC
7	Laboratory Centrifuge
8	Table top high temperature lift bottom furnace with chamber volume of 2 litres or more
9	Accessory for existing freeze dryer; Round shape dryer with shelf for drying of petridishes& test tubes in racks with suitable and compatible oil vacuum pump and adapters
10	Upgradation of existing Hot Isostatic Press (HIP) [Control panel, Furnace chamber, Software, Pressure line, Safety features]
11	Upgradation of existing Cold Isostatic Press (CIP) [Control panel, Pressure chamber and liquid, Software, High pressure line, Safety features]
12	MESCO Ball and Cup Polishing Machine upgradation comprising of Ball/ Cup holding unit, Drive spindle & bearings with VFD, Oscillating head with new motor, Gear box & VFD [Optional: Pressure/ Force Control system (with load cells)]
13	Plasma spray accessories (powders hoppers – 2 nos. & spray gun)
14	Plasma spray accessories (Acoustic spray booth)
15	4-station planetary milling machine
	Projector; Standard Throw Multimedia Projector with Full HD resolution; With WiFi connectivity, Wireless screen share with optional LAN connectivity; USB, HDMI; Brightness 3200 Lumens or more

Projected Procurement Plan for BCCD in next 3-4 Years

Sl. No.	Name of the equipment with major specification (in brief)
1	Automated Cell Counter
2	Micro Centrifuge
3	Ultrasonic probe sonicator/ homogenizer
4	Mini Trans-Blot Electrophoretic Transfer
5	LIPUS units
6	Color camera for existing biological microscope
7	Table-top DIW printer + custom FDC printer with screw based extruder
8	Feedstock mixer + chopper for FDC feedstock preparation
9	Debinding furnace
10.	High temperature vacuum graphite furnace Maximum temperature: 2200 degree centigrade, maximum vacuum level:10 ⁻⁵

	6mbar
11	High temperature tube furnace Maximum temperature: 1800°C, Molybdenum disilicide heating element.
12	Milli Q Ultrapure Water Purification system directly from tap (resistivity 18.2 M Ohm cm at 25 Degree C; flow rate Up to 2 L/min)
13	Replenishment of gamma source of Gamma Chamber (GC-5000 unit)
14	Hip joint simulator with advanced features; 6-station together mimicking body environment, load and physiological condition; actual implant-stem combination; facility of volumetric wear calculation, fatigue, displacement; temperature controller and soaking liquid level automatic sensor; facility of various loading profile as per ISO (for level walking, staircase movements, running, etc.); Options for suitable fixture for dental implants
15	6-axis CNC grinding and polishing machine for ceramic hip and knee implants; 6 CNC axis for grinding and polishing of complex shapes; programmable pressure; reproducible and repeatable material removal; Advanced controller with integrated operator panel; Solid continuous one-piece machine; Robust belt drive; Capable to achieve < 30 nm Ra of ceramic hip and knee implants after grinding and polishing
16	4-station high-energy planetary milling machine; 4 grinding stations; To be used for 250/ 500 mL (4 nos.) zirconia pots, Floor model
17	Projector; Standard Throw Multimedia Projector with Full HD resolution; With WiFi connectivity, Wireless screen share with optional LAN connectivity; USB, HDMI; Brightness 3200 Lumens or more
18	Selective Laser Sintering (SLS) machine suitable for ceramic processing with following tentative spec; Laser and Scanning: 100 watt CO2 laser; Additional laser source with 500 W output; Physical maximum build envelope: Approx. W 380 x D 330 x H 450 mm ($\pm 10\%$); Input data file format: *.STL; CAD/CAM module: 3D shop having capability of typical standard Read/Write formats like IGES, STEP, VRML, STL, B-Rep etc.
19	FTIR with UATR with: Wavenumber minimum range 4000-400 cm ⁻¹ ; Resolution 0.5 cm ⁻¹ or better; 30000:1 or better peak-peak signal-to-noise for 1 min. scan; Wavelength accuracy 0.1 cm ⁻¹ or better at 3000 cm ⁻¹ ; Long-life source; Optimum optics, detector, beam splitter, desiccant and software; Diamond UATR accessory for direct sample measurement without KBr pallet making
20	Laptop; Intel Core i5 10th Gen.; RAM 16 GB; 1 TB HDD + 512 GB SSD; Webcam; Bluetooth v. 4.1 or above; WiFi; Processor Speed upto 4.6 GHz
21	Table top high temperature lift bottom furnace with chamber volume of 2 litres or more
22	Laser purging and melting setup
23	Bio-tribometer
24	Wound dressing gauge making assembled machine comprising of auto-cutter, pre-freezing bath, lyophilizer, UV sterilizer and vacuum packaging unit