



All India Institute of Medical Sciences Jodhpur

Admn/Prop/96/2021-AIIMS.JDH

Dated: 31st January 2022

Subject: Purchase of Ultracentrifuge for the Department of Microbiology at AIIMS, Jodhpur on proprietary basis - **Inviting comments thereon.**

The Institute is in the purchase of Ultracentrifuge for the department of Microbiology at AIIMS, Jodhpur from M/s Backman Coulter India Pvt. Ltd., Unit Nos. TF-B-07 (A0 to15, Survey No. 5A, Third Floor,B Wing, Art Guild House, Phoenix Market City, LBS Road Kurla (W), Mumbai on proprietary basis. The proposal submitted by M/s Backman Coulter India Pvt. Ltd., Mumbai and PAC certification by user are attached.

The above document are being uploaded for open information to submit objection, comments, if any from any manufacturer regarding proprietary nature of the equipment within 21days of issue giving reference Admn/Prop/96/2021-AIIMS.JDH. The comments should be received by office of Deputy Director (Admin), Medical College at AIIMS, Jodhpur on or before 22nd February 2022 upto 03:00 PM failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

Yours faithfully,

Deputy Director (Admin)

Enclosed: Related documents enclosed.



All India Institute of Medical Sciences Jodhpur



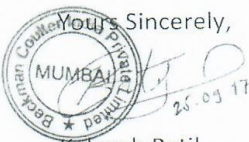
Beckman Coulter India Pvt. Ltd.

Unit Nos TF-B-07(A) to 15
Third Floor, B Wing, Art Guild House
Phoenix Market City, LBS Road
Kurla (West), Mumbai - 400 070
Tel + 91 22 3080 5000
Fax + 91 22 3080 5060

PROPRIETARY CERTIFICATE

To Whom It May Concern:

This is to certify that the Beckman Coulter Optima X series ultracentrifuge Dynamic Rotor Inertia Check (DRIC) is a patented technology and this instrument is manufactured by Beckman Coulter Inc, USA. The accessories includes compatible rotors and labwares i.e. quick-seal tubes, opti-seal tubes and g-max spacers are highly specialized & proprietary items manufactured by Beckman Coulter Inc, USA and to the best of our knowledge no other manufacturer in the world manufactures this instrument and its accessories.



Yours Sincerely,

Kalpesh Patil

Application Specialist – Centrifugation

Beckman Coulter India Pvt Ltd

[Handwritten signatures]

Beckman Coulter India Pvt. Ltd.

Registered Office: Unit Nos TF-B-07(A) to 15 Third Floor, B Wing, Art Guild House, Phoenix Market City, LBS Road,
Kurla (West), Mumbai - 400 070 Tel +91 22 3080 5000 Fax +91 22 3080 5060
CIN U33119MH2005PTC157177 www.beckmancoulter.com



SPECIFICATION FOR ULTRA CENTRIFUGE

Detailed Specifications for Refrigerated Ultracentrifuge (floor model) with Necessary Rotors Adapters and Other Accessories:

1. The preparative refrigerated ultracentrifuge should be capable of going to speeds of 100,000 RPM or more; equivalent to $\sim 800,000 \times g$ or more.
2. Air cooled, vacuum encased drive with a minimum of 10 years of warranty.
3. Speed control accuracy of ± 2 RPM and temperature control of $\pm 0.5^\circ\text{C}$.
4. Maintain set rotor temperature of 0°C to 40°C in 1 increments and ambient operating range between 10 to 35°C .
5. In-built Imbalance tolerant drive to ± 5 ml or 10% of sample volume
6. Ability to restart automatically: restarts after a power failure.
7. Delay start from Zero rpm.
8. On-board simulation software for run time calculation, gradient protocol optimization and more
9. On-board references should include: Rotor Catalogue, Rotor Tube Catalogue, & Chemical Resistance Chart
10. The system should have technology like Dynamic Rotor Inertia Check to check for rotor failure for better user and sample safety.
11. Large touch-screen display with adjustable positions for easy readout from distance.
12. Constant display of actual and set parameters on touch screen interface
13. Multi sequential step automatic operation & five-step sequential user-defined program operation & three levels of security (Administrator, Supervisor & Operator)
14. Moisture removing vacuum system to eliminate moisture
15. Rotor warranty of minimum eight years
16. Rotor material: Titanium
16. Power supply: $230 \text{ V} \pm 10\%$, $50 \text{ Hz} \pm 3\%$.
17. Wide Voltage tolerance range from approx. $185 - 260 \text{ V AC}$.
18. One fixed angle Titanium rotor capable of going up to 100,000 RPM or more (about 800,000 g), with compatible volume per tube of $\sim 6 \text{ ml} \times 8$ or more along with necessary tubes and adapters to run smaller volumes of $\sim 2 \text{ ml}$ in the same rotor at 100,000 rpm without reduction in g force of 8,00,000 g force.
19. One fixed angle titanium rotor capable of going up to 70,000 RPM or more (about 400,000 g), compatible volume per tube $\sim 38 \text{ ml} \times 6$ or more at rotor at 70,000 rpm or more. Also ability to run lower volumes $\sim 15 \text{ ml}$ & 27 mL using adapters and accessories at 70,000 RPM.



All India Institute of Medical Sciences Jodhpur

20. One fixed angle titanium rotor capable of going up to 45,000 RPM or more (about 230,000 g), compatible volume per tube ~94 ml X 6 or more at rotor at 45,000 rpm or more.
21. One swing bucket titanium rotor capable of running up to 32,000 RPM (about 175,000 g), volume per tube of ~38 ml X 6 and along with adapters and accessories to run smaller volumes in the same rotor at 32,000 rpm.
22. One swing bucket titanium rotor capable of running up to 41,000 RPM (about 285,000 g), volume per tube of ~13 ml X 6 along with adapters and accessories to run smaller volumes in the same rotor at 41,000 rpm.

Safety Requirements:

- a. The door and vessel shall be of high-strength structural steel chamber with a solenoid interlock to prevent operator contact with a spinning rotor
- b. Shall lock automatically when the door is closed and a run begins.
- c. An imbalance detector shall monitor the rotor during the run, causing automatic shutdown if rotor loads are severely out of balance.
- d. Shall have over speed system to ensure that the rotor does not exceed its maximum allowable speed.
- e. Shall have an inbuilt secondary safety system to calculate rotor energy/inertia and stop the centrifuge to prevent rotor failures
- f. Shall have optional HEPA filter of 0.2 μm for biocontainment.
- g. Sound level should be <51 dBa

H. Desai
Jen. *P. M.* *Aidhi*