



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
Powai, Mumbai 400076.

Ref. PR No. 1000056751

Rfx. No. 6100003108

Technical Specification for 3D Cell Culture Incubator and Bioreactor

Sr.no	Parameters	Item Description	Complied (Yes/No)	Additional Info if any
1	System type	Standalone benchtop 3D cell culture incubator and bioreactor		
2	Culture principle	Low-shear 3D culture using controlled bi-directional tube rotation		
3	Culture format	tube-based 3D culture system		
4	Number of culture positions	Up to 4 individually controlled tubes		
5	Working volume	Up to 50 mL per tube		
6	Cell culture compatibility	Stem cells, spheroids, organoids, tissue biopsies and other 3D cell culture models		
7	Environmental control	Temperature, CO ₂ and pH monitoring/control capability		
8	Temperature control range	7 degrees C above room temperature to 45 degrees C		
9	Temperature control accuracy	+/- 0.1 degrees C		
10	CO ₂ control range	0% to 18% CO ₂		
11	CO ₂ control accuracy	+/- 0.1%		
12	CO ₂ sensor	Laboratory-grade infrared CO ₂ sensor		
13	User interface	Integrated touch-screen panel		
14	Display	Approx. 6.4-inch touch-screen interface		
15	Culture monitoring	Real-time monitoring of temperature and CO ₂ ; pH monitoring when pH-reader module is included		
16	Data handling	Export of run/culture reports through USB or communication interface		
17	Instrument dimensions	Approx. 740 mm x 324 mm x 245 mm		
18	Instrument weight	Approx. 14.5 kg		
19	Power supply	100-240 V AC, 50/60 Hz		
20	Maximum power consumption	Approx. 200 VA		

21	Operating environment	Indoor laboratory use		
22	Operating temperature	15 degrees C to 28 degrees C		
23	Operating humidity	15% to 85%, non-condensing		
24	Communication	USB, Ethernet and RS232 connectivity		
25	Safety and maintenance	HEPA filtration support and replaceable consumables		
26	Consumables	Tubes, HEPA filters, adaptor kit and connection tubing as applicable		
27	Warranty	Comprehensive warranty of 3 years from the date of Commissioning with quarterly visit + 1 emergency visit		