



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

Ref. PR No. 1000057768

Rfx. No. 6100003140

Technical Specification for Gradient Fractionation & Profiling System

Sr. No	Item Description	Detailed Technical Specification	Technical Compliance (Yes / No)	Additional Information (if any)
1.	System Specifications	i. An analytical density gradient fractionation and continuous UV profiling system suitable for sucrose, CsCl and glycerol density gradients ii. Fractionation system should be suitable for high reproducibility density gradient fractionation applications including ribosome profiling, polysome profiling, RNA/DNA separation and protein complex studies iii. Fractionation system should utilize precision piston displacement technology for reliable density gradient fractionation iv. Fractionation system should be compatible with standard ultracentrifuge gradient tubes. v. Software with preloaded data acquisition capability to visualize, acquire and analyze UV profiles vi. Programmable fractionation and rinsing functionality shall be available in the fractionator vii. Availability of interchangeable piston tips and tube holders to accommodate multiple tube sizes viii. Fractionation system should provide high-resolution density gradient fractionation suitable for separation and profiling of ribosomes, polysomes, nucleic acids and related biomolecular complexes ix. Fractionation system should incorporate a		

		high-resolution fraction recovery mechanism designed to maximize sample recovery and fractionation accuracy. x. Visible light scattering band visualization system for ribosomes, viruses and similar particles shall be provided. xi. Front panel LCD display with keypad control. xii. UV scan capability for density gradient profiling at 260 nm. xiii. Fraction collector advance cable shall be included. xiv. Rinse and air pump system for cleaning sample tubing after each fraction shall be provided. xv. The instrument shall be supplied complete with all essential accessories required for density gradient fractionation, UV profiling and fraction collection as described below. xvi. Operating voltage 100–240 VAC, 50/60 Hz		
2.	Essential Accessories	i. Tube Mount and Accessories (Tube holder for 25 mm × 89 mm ultracentrifuge tubes with a box of 50 open top clear centrifuge tubes, retainer cap, cursor, piston tips and seals for sample displacement and fraction recovery). ii. All standard consumables, tubing, seals, connectors and accessories required for routine operation of the system shall be included as per manufacturer's standard supply kit iii. UV Flow Cell for profiling capable of scanning density gradients at 260 nm. iv. Software for acquisition, visualization, plotting and export of UV profile data v. Fraction Collector compatible with the supplied density gradient fractionation system vi. Fraction Collection Rack suitable for collection into 60 × 1.5 ml microcentrifuge tubes		
3.	Warranty	Instrument should be supplied with standard 1-year Warranty		