Annexure-A

SPECIFICATIONS FOR HPLC with PDA detector for protein analysis (FPLC system)

1. The system should be automated & stand-alone for protein purification and analysis work to make it easy to purify a wide variety of proteins using built-in quick start methods or predefined templates, or by creating own methods.

2. The system should be suitable for affinity, ion exchange and gel filtration chromatography column and should have an inbuilt intuitive touch screen display with real time monitoring.

3. The system pump must be peristaltic and should deliver a flow rate between 0.5 to 5ml/min and must consist of a four-roller pump head that delivers low pulsation and for accurate flow rates for reproducible isocratic and gradient elution.

4. The system must comprise of 3-port solenoid type switch valves and a manual injection valve is a 6-port rotary valve that is manually operated to transfer the preloaded sample onto the column.

5. The system should have automatic gradient formation capability (5 to 95% of buffer B).

6. The Pressure sensor incorporated in the system must read the pressure in the flow path and sense overpressure, to ensure that there is no compression of bed in the column matrix.

7. The system should have a pressure range should between 0 to 0.5MPa (72 psi) and a wash flow rate of 10 ml/min.

8. The system should have capability of operating with solvents with viscosity in the range between 0.6-5cP.

9. The system should have an injection valve and a 0.4 ml static mixer which can be used for blending buffers during gradient runs, ensuring reproducibility across purification runs.

10. The system should have continuous LED-based UV detection/monitoring at 280nm and must be ready-to-use without any warmup time. The UV detector should not generate any local heating of the flow cell, making it particularly suitable for heat sensitive samples and have a 2 mm optical path length flow cell.

11. The conductivity monitoring range should be between 1 to 300 mS/cm or wider with temperature monitor range 4°C to 32°C or wider.

12. System should have capacity to collect at least 25 fractions in single run, when connected to a fraction collector.

13. The system should have a Fraction collector, supporting 1.5ml micro centrifuge tubes and 10 or 15ml tubes, collecting volumes between 0.5 to 15ml.

14. The software must include four different modules: System Control, Method Editor, Evaluation, and Administration, allowing you to design runs, operate the instrument, and to evaluate and share results.

15. Predefined methods must be available for cleaning the system flow path and flow cells (UV, conductivity), as well as for testing the system performance.

16. The system should allow transfer of result for detailed analysis on software on PC. The software must be provided from the manufacturer. Additionally, the instrument should provide the result in .bmp format to allow viewing of the generated result without software.

17. System Should have Warranty of 03 Years from the Date of Installation.