

DEPARTMENT OF FOOD SCIENCE & TECHNOLOGY

SPECIFICATION RHEOMETER

1. The Rheometer should have the capability to perform Rheological Studies in following modes :
Rotational
Oscillatory
2. The Rheometer should have following Torque specifications :
 - a) Minimum Torque : 250 micro-Nm
 - b) Maximum Torque : Not less than 200 milli-Nm
3. The Measurement Motor should be Electronically coupled/ Drag cup to give the best Oscillatory response for the following wide range of Frequencies in both Control Shear Stress and Control Shear Strain Operating modes:
Minimum frequencies: 0.1 Hz
Maximum frequencies: 10 Hz
4. The Rheometer should be equipped with Normal Force sensor to safeguard the bearing against the axial load by highly viscous samples.
5. The Rheometer should have Automatic Gap control settings
6. The Rheometer should be quoted with Starch Cell for the complete characterization of starch pasting properties of different types of samples.
7. The Rheometer should have variety of Measuring Tools/Geometries.
8. Measuring Systems: Measuring Geometries should include the following (optional):
 - i) Cone/Plate measuring geometry
 - ii) Plate/Plate Measuring geometry
9. Peltier Temperature Control for cone/Plate & parallel plate geometries.
10. The software should have basic test templates for all type of Rheology variables.
11. CIF Amritsar

SPECIFICATIONS (TWIN-SCREW EXTRUDER)

Laboratory Model Twin-Screw Extruder, designed for teaching, R& D and product development to process feed materials such as fine, flours, coarse grit and high fat starchy materials with following features:

1. Feed rate up to 15 kg per hour (depending upon nature of feed materials and quality of products desired)
2. Feed Funnel
3. Twin –screw feeder, driven by variable speed motor
4. Barrel fabricated of steel with water jackets.
5. Drive through reduction gear unit and system to control rpm.
6. Provisions for power cut-off when the load exceeds pre-determined limit – a reliable safety limit.
7. Die plate three nos. dies of different diameter
8. Stainless steel cutter, driven by variable speed motor
9. Safety device vide limit switch for the cutter
10. “Stand alone” panel board.
11. M. S. fabricated sub-frame
12. CIF Amritsar.

TERMS AND CONDITIONS

1. Tender must be accompanied by earnest money @ 2% of the quoted amount in the shape of demand draft in favor of “Registrar, Guru Nanak Dev University, Amritsar” and payable at Amritsar.
2. FOR Guru Nanak Dev University Amritsar.
3. The taxes / custom duty if any should be quoted specifically.
4. Consumables, accessories and spares worth for trouble free running of the instrument for atleast three years must be quoted. Original service manual as well as operation manuals must be provided.
5. Warranty: System must be quoted along with minimum three years comprehensive warranty.
6. Original manufacturer should guarantee supply of original spares for adequate servicing of the instrument and provide support for upgradation of the instrument whenever asked for.
7. Imparting operational training by the service engineer at the time of installation, calibration, standardization. Three officials should be trained for complete working and maintenance.
8. System must be quoted with all the accessories to run the system.
- 9.. Payment against delivery, installation and satisfactory working of the equipment.