Specification for Electrospinning Unit

Spinning Arrangement

- 1. Horizontal and vertical
- 2. Co-Spinning
- 3. Under solvent spinning

High Voltage power supply

- 1. Input voltage: 230-240VAC+/- 50 Hz
- 2. Output voltage: 0 to 30 kV or up to 40 KV
- 3. Output current: 0 to 0.4mA or up to 0.5mA
- 4. Voltage Regulation: 0.1 KVresolution
- 5. In-Built Circuit Protection

Syringe pump: independent control dual channel with

- 1. speed and flow rate adjustable)
- 2. Dual Syringe attachment
- 3. Acceptable syringe volume:5 µl-20ml
- 4. Flow rate resolution: 0.1
- 5. Flow rate: 0.1 µl/min to 3ml/min or up to 10 ml/min
- 6. Volume, Time and Flow control

Collector: Stationary collector/Plate

Collector: Length=220mm X Width=150mm

- 1. Drum collector D =85 mm,L=165 mm,
- 2. Disc Collector D=85 mm, L=10 mm
- 3. Rod Collector: D =6 mm,L=100 mm, and D =4mm, L =100mm (For blood vessel graft)
- 4. Adjustable s peed of rotating drum(100 to 5000 RPM)
- 5. Fiber alignment

Spinneret

- 1. Co-axial nozzle (Stainlesssteel arrangement with fixedneedle geometry)
- 2. Multi-nozzle (4 changeable nozzle geometry)
- 3. Single Nozzle

Control panel

- 1. Emergency stop
- 2. Main ON/OFF
- Exhaust speed regulator

Operational Control

- Dell laptop with Intel i5 core processor, SSD, 8GB RAM with original window and preinstalledsoftware required
- 2. HP 1TB USB drivers
- 3. HP1005 Printer
- 4. License software to connect the machine with Laptop

Spinning chamber

- 1. Digital Temperature and Humiditydisplay.
- 2. Ambient temperature control up to 60 °C
- 3. Exhaust fan with HEPA filter to remove the harmful chemical/vapors
- 4. Illuminating Light: 10 W LED tube
- 5. UV Light: 10 watts
- 6. Computer control interface
- 7. Glass window
- 8. Inert gas purging facility
- 9. Epoxy coated for electrical insulation

Accessories

- 1. Standard syringes with needles (3ml,5ml and 20ml) 2 box each
- 2. Spare Needle
- 3. Glass Syringe with tube connector
- 4. Standard spinning samples
- 5. Allen Key set
- 6. Screw driver set
- 7. Insulation pad/Foot pad
- 8. Teflon sheet to avoid the solutionspillage
- 9. Chemical resistance tube (5mtrs) forvertical electrospinning
- 10. Tube connectors
- 11. UPS for power supply

Note: User list with contact details and model supplied to the user

Warranty period: 3 years