

Product Name :
TVET Reverse Osmosis Training System

Product Code :
NLAB-EDUCATIONTVET28001



Description :

TVET Reverse Osmosis Training System

Technical Specification :

The Training System Should cover the following Training Objective:

Familiarization with assembly, cleaning and conservation of membrane modules

Basic principle of reverse osmosis: Van't Hoff's law

Practice of fundamentals of reverse osmosis

Permeate flow rate and retention dependent on: (pressure, salt concentration in raw water and yield)

Determination of diffusion coefficients

Minimum Technical Specifications Required (like or better than):

Polyamide spiral wound membrane module with active area: 1.2 m², maximum raw water flow rate: 1.4 m³/h, length: 530mm approximately and diameter: about 60mm

Piston pump with pulsation damper of maximum flow rate: 580 L/h, maximum pressure: 138bar approximately and maximum operating pressure: 55bar

PLC control unit

The system should be controlled with PLC via touch screen

Overflow valve to adjust the pressure upstream of the membrane module

Valve to adjust the retentate flow rate

Raw water tank of 110L with stirring machine of power consumption: 125W and speed: 50 to 1000rpm

Distilled water tank: 110L

Permeate tank: 5L

Safety cutout for pump protection against dry running

Retentate flow rate measuring range: 0.5 to 7.5L/min,

permeate flow rate measuring range: 0.05 to 1.8L/min

Temperature measuring range: 3x 0 to 60°C

Manometer pressure measuring range: 2x 0 to 100bar

Sensor pressure measuring range: 2x 0 to 100bar

Conductivity measuring range: 3x 0 to 200 ms/cm

Should be able of conducting screen mirroring of the user interface on end devices

Should include a navigation menu on the touch screen which is independent of the user interface

Should include different user levels on the end device for: observing the experiments, operation and control

Data acquisition unit with software

WLAN/ LAN interface

USB interface

PC Core i7, DVD+/-RW, 8GB RAM, 1TB Hard Disk Drive, Optical Mouse, Multimedia Keyboard, Monitor (21")
LED

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