

## **SPECIFICATION – Fully automatic kjeldahl/Protein estimation system**

Reagent pump volumes: 0 – 150 ml in steps of 10 ml

Delay: 0 – 1800 seconds

Steam addition for equilibrium: 0 – 15 seconds

Water consumption (during distillation only): 2 l/min at water temp of 30°C, 1 l/min at water temp of 15°C

Corrosion free coloured plastic cabinet.

Cooling water flow control

Distillate temperature monitoring and warning facility.

Polypropylene splash head

Polypropylene tube emptying vessel

Bellow pumps for reagent addition .

20L reagent tanks fitted with proper capping and reagent sensors.

Reagent sensors for Water/Alkali/Waste/titrant

Automatic alkali addition/ dilution water addition /receiver solution addition and calculation of result. Inbuilt titration vessel . Automatic cleaning of titration vessel Maintenance free titration device. Must be connected to LAN network for remote monitoring and connection to LIMS.

Automatic opening and closing of distillation safety door.

Glass condenser with insulation and visible at both ends and no joints and free of metal.

Autosampler for 20 place should be quoted in optional. Autosampler should not need shifting of tubes from digestion system to autosampler one by one instead entire digestion rack should be able to go into the autosampler to save time and avoid risk of breakage and spillage of chemicals.

**Automatic Block digester with autolift** (as per below specification ) with all the accessories and catalyst tablets.

Number of samples: 20

Temperature range : 100 to 440 degree C

Temperature setting repeatability : 1 degree C

Temperature readout : digital

Over temperature protection

Time setting per step : 1 - 1199 min

**Scrubber to neutralise fumes:** It should not need running tap water during digestion.

It should have inbuilt pump .It should have Glass bottle for reagents. It should have trap between pump and scrubbing area to avoid fumes.

To be supplied with ,Cyclone Grinding mill for sample preparation with 0.5 mm and 1 mm sample size .

**IMPORTANT NOTE** : All quoted items must be from the same manufacturer .

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