

# Automatic Nitrogen/Protein Estimation System



## ▶▶ TECHNICAL SPECIFICATIONS

### ▶▶ A. Automatic Macro Block Digestion System



Superior Automatic Autosequencing Twenty Place PC Compatible Regular Version Macro Block Digestion System with Touch Screen Display (Suitable for plants, soils, water, food & feed, Fertilizers & pesticides samples)

- Automatic Macro 20 Place Microprocessor based digestion system
- Superior PC compatible Auto Sequencing features
- Aluminium Block 250ml capacity with Digital Temperature Controller
- Temperature Control Range: Room temperature to 450 ° C
- Temperature controller is isolated separately in a control tower to protect electronics from digestion heat zone and acid reaction zone.
- Casted Aluminium Alloy Heaters,
- Inbuilt digital integrated timer
- Microprocessor Allows 70 intelligent memory Programmes
- 12 desirable sequence steps of time /temp. domain,
- 840 memory segments with intelligent software
- Display : 4.3" TFT Graphic touch screen Display. 480 x 272 QVGA Resolution, RGB 65,000 true to life colours,
- TFT Screen Capacitive Touch, Supports all available Windows fonts and characters.
- Unique wireless mouse to operate touch screen directly without PC at a distance of 1-2 mtrs from equipment. This protects the touch screen from damage / scratches due to nails in fingers.

- Display status : SV, PV, Program No. Step No., & timer
- Display Resolution : 0.1
- PORTS: Two direct ports on mother board.
- One Direct USB port to connect PC for 2 way communication with print options
- Second USB port to connect unique wireless mouse of Touch screen display directly without connecting to PC/ memory stick (pen drive) / Datalogger to copy stored and logged datas.
- Memory stick for data storage with separate port in mother board.
- Additional PC Chart Software
- Remote Control Module for PC/Laptop Compatibility for wireless data monitoring, control and transfer to PC at a distance of 5-10 feet from equipment
- The user can view all the programme that is set & the current status of programme in process from his work table on his laptop or PC at a distance of 5-10 feet and can also control or alter settings.
- The entire display screen wirelessly appears in the users PC .
- Inbuilt software programme to handle Micronutrient, Macronutrient, Trace Element with single Acid, Diacid and triacid digestion
- Inbuilt safety features like auto error indication, auto over temperature protection and auto sensor break protection.
- Auto alarm for user's attention, Auto power off mode on completion of digestion
- 20 Digestion Tubes (Macro) 250 ml, SS Insert Rack, Exhaust Manifold System with teflonadaptors, Cooling Support Rack, Easy autofix spring clamps,
- Viton fume hose for diacid and triacid digestion System (3 mtrs)
- KEL FLOW Assembly Suction filter pump for fume removal,
- Suction Assembly wall mounted on rear side of unit for safe & easy access to drain area
- Electrical Requirement: 220V/50Hz Ac mains.

## ▶▶ B. Automatic Scrubber System



### Three Stage Acid Neutralizer Scrubber

- First stage : Alkali (15%NaOH), Second stage : water
- Third stage : Dissolution of air free of acid fumes in raw tank water
- Vacuum source : Giant Aspirator pump
- Tank Capacity: 8litres,Alkali container capacity : 2 litres
- Water container capacity : 2 litres
- Outer cover : MS Powder Coated
- Tank :Fibre Reinforced Plastic Tank.
- Recirculation Pump: Non corrosive centrifugal inbuilt magnetic suction pump for water recirculation in 8 ltrs tank avoids requirement of running water during digestion
- Electrical Requirement:230V/50Hz AC Single Phase

## ▶▶ C. Automatic Distillation System



Superior Fully Auto Run completely Programmable Autosequencing  
Microprocessor based Distillation System with in-built software with 100 Predefinable User  
Storage Auto Sequence Programmes and Programmable steps

- Fully Automatic sequencing with auto Intelligent run of programmable steps
- Automatic Receiver Solution Addition, Automatic Dilution
- Automatic KMNO<sub>4</sub> Addition for Available Nitrogen
- Automatic Alkali Addition, Automatic Steam Injection
- Fully Automatic Residue Removal, Process over indication with alarm
- Automatic Titration Connectivity feature for future upgration
- With inbuilt delay time features
- Microbrilliant distillate control with adjustable sensor
- Two line Alpha numeric Digital LCD Display
- Auto door open warning indication
- Auto tube insert error indication
- Auto deactivation of System on error diagnosis
- Alarm for Reagents (Boric Acid, Alkali & KMnO<sub>4</sub>) Adjustable steam power: 10-100%, Auto online water saving mechanism.
- Automatic sensing of no water condition in the condenser & steam generator with auto alarm and warning signal to alert user.

- Auto deactivation of operation after few minutes of warning on "No water Condition" in condenser & steam generator in case of user non availability
- Automatic monitoring and measuring of high temperature in distillate with auto warning signal and safety alarm to control distillate temperature
- Continuously measured temperature is displayed digitally
- Standard RS 232 connectivity kit with USB port

Distillation Capacity: 15-20 Samples/hr, Nitrogen Recovery > 99.5%

- High grade Stainless steel non corrosive steam Generator
- Fully Automatic water level monitoring with centrifugal refilling pump & Peristaltic pump for reagents addition
- Reagents tanks wall mounted for easy handling and users visibility.
- The control panel unit along with inbuilt temperature controller, timer, mother board and SMPS is isolated in separate control tower and housing to protect electronics from wet chemistry & acid/alkali process area for longevity and safety of all electronic components
- Equipment incorporates transparent view window to watch the distillation process & splash head.
- Stainless Steel additional safety spill tray
- Standby Manual operation of all parameters
- Software compatible with CLASSIC DX for calculation and reporting of results with builtin formulae. Interconnectivity cable to operate system through PC or Laptop
- Electrical Requirement - 220V/50Hz

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