



Integrated Work Station for Nitrogen Estimation



Product Description

KLABS KIWNE-220 is a compact 3-in-1 nitrogen analysis platform integrating Digestion, Distillation and Auto Titration for Kjeldahl protein determination, Non-Protein Nitrogen (NPN), volatile compounds and related analysis.

Features

- 3-in-1 System with Three Parallel Independent Workflows
- Auto steam generator with proximity-based water level sensing and pressure control
- Integrated automatic titration with precise endpoint detection
- High-precision burette/piston titrant delivery system tolerance <0.1 ml
- Inbuilt scrubber for safe absorption of digestion fumes
- Fully automatic distilled water addition during distillation
- PC connectivity with data editing, data export and USB connection through integrated Labs-Connect™ software
- Comprehensive sensor monitoring for safe unattended operation
- High thermal conductivity aluminium alloy digestion block

Application/Uses

- Protein Determination by Kjeldahl Method
- Nitrogen Analysis in Food & Feed Samples
- Soil & Fertility Testing
- Environmental & Wastewater Analysis
- Industrial & Chemical Laboratories
- Pharmaceutical & Biotechnology Laboratories

Operation & Automation

- 7-inch Full-HD capacitive touch display with modern LCD interface and Labs-Connect™ software for control and real-time monitoring.
- Remote monitoring & control via optional Labs-Connect™ module or PC Connectivity.
- Programmable reagent addition (boric acid, water, sodium hydroxide).
- Smart error detection with alarms for low water, reagent levels, temperature faults, and system abnormalities.
- Low-maintenance design with easy service access and tool-less cleaning



Technical Specifications

Parameter	Specification
Product Name	Integrated Work Station for Nitrogen Estimation
Model No.	KIWNE-220
Analysis time	4 Min. and Above (titration included)
Measuring range	0.04 -220 mg N
Reproducibility (RSD)	≤1%
Recovery	≥99.5 %
Sodium hydroxide addition	Automatic
Water addition	Automatic
Boric acid addition	Automatic
Distillation residues removal	Automatic
Titration residues removal	Automatic
Titration vessel cleaning	Automatic
Selectable distillation time	Not necessary
Steam flow regulation	10 -100 %
Water consumption	0.5 L/min at 15°C; 1 L/min at 30°C
Distillation in series	Yes
User management	Yes
Programs	60 Customizable
21 CFR PART 11 Compliance	Yes, (Optional)
Connectivity	USB/Wifi (Labs-Connect™)
Power input	Digestion 2.0 kW & Distillation 1.5 kW
Dimensions (WxHxD)	785x910x490 mm
Weight	91 Kg for IWS Model
Capacity	6 x 300 ml, 42 mm OD Kjeldahl tubes
Temperature Range	Ambient to 450 °C
Temperature Accuracy	±1 °C
Temperature Control	PID-based point and curve control
Auto Scrubber	Automatic drain and refill after each digestion cycle
Analysis Scope	0.1 – 240 mg N
Precision (RSD)	≤0.5 %
Recovery	99%
Cooling System	High-efficiency coil condenser
Cooling Water Consumption	1.2 – 3.0 L/min
Safety Features	Over-temperature and dry-run protection
Accuracy	±0.1 %
Endpoint Detection	Colorimetric
Dispensing Mechanism	High-precision piston-based titrant delivery system
Dispense Resolution	0.01 ml
Power	220–240 VAC, 50/60 Hz, 20A