SDDN636 Dumas Nitrogen/Protein Analyzer

Analysis time 3-4 minutes per sample.

Stackable auto sampler, up to 144 samples in 4 layers.

Fast, safe, and green - the Dumas combustion method.

No hazardous substances or complex pretreatment - full automation, high efficiency.

Dimensions: 710 mm (L) *660 mm (W) *1085 mm (H)
Weight: Approx. 160 kg

Application

Sundy SDDN636 Dumas Nitrogen/Protein Analyzer is suitable for rapid and accurate determination of total nitrogen/protein content in food (such as dairy products, cereals, flour, meat products, brewing raw materials), fertilizers (such as organic, inorganic and bio-fertilizers), automotive and industrial urea, agriculture and environmental samples (such as soil, tobacco, plant tissues, etc.).

Conformance to Standards

- ASTM D5291 Standard test methods for instrumental determination of carbon, hydrogen, and nitrogen in petroleum products and lubricants.
- ISO 16634 Food products - Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content.
- ISO 29541 Solid mineral fuels - Determination of total carbon, hydrogen and nitrogen content - Instrumental method.
- AOAC 990.03 Protein (Crude) in Animal Feed, Combustion Method.
- AOAC 992.15 Crude Protein in Meat and Meat Products: Including Pet Foods Combustion Method.
- AOAC 992.23 Crude Protein in Cereal Grains and Oil Seeds Products, Combustion Method.
- AOAC 993.13 Nitrogen (Total) In Fertilizers, Combustion Method.
- AOAC 997.09 Nitrogen in Beer, Wort, and Brewing Grains Protein (Total) by Calculation: Combustion Method.
- GB/T 46133 General rules for nitrogen determination by Dumas combustion method.
- GB/T 30728 Determination of nitrogen in solid biofuels.
- GB/T 42955 Determination of total nitrogen content in fertilizers - Dumas combustion method.

Specification

Measuring Range	0.01~200mgN or 0.01%~100%N
Analysis Time	3-4 mins / sample
Auto Sampler	36/72/108/144 positions, continuous loading supported
Sample Weight	up to 1.5 g (solids); up to 1 mL (Liquids)
Gas Requirements	Combustion-supporting gas: Oxygen, ≥99.999% purity, ≥1 MPa
	Drive gas: Nitrogen, ≥99.5% purity, ≥1 MPa
	Carrier gas: Helium, ≥99.999% purity, ≥1 MPa
Relative Standard Deviation	RSD≤0.5% or 10mgN
Power Requirement	220V±10%，50/60Hz
Max. Power	4.5kW
Combustion Furnace Temp.	1200℃ (MAX)

Highlights

Large sample capacity with flexible expansion.

- The standard auto-loader includes 36 sample positions, expandable on demand to 72, 108, or 144 positions. Continuous sample introduction without interruption. Adapts to different laboratory throughput requirements, eliminating repeated start/stop cycles and reducing batch-to-batch downtime.

Compatible with both solid and liquid samples, minimal sample preparation.

- Both solid and liquid samples can be directly introduced, with a maximum sample capacity of 1.5g for solids and 1mL for liquids. No complex pretreatment equipment required, routine laboratory samples can be directly analyzed without additional preparation, offering flexible and convenient operation.

Automatic airtightness test available, simple and user-friendly.

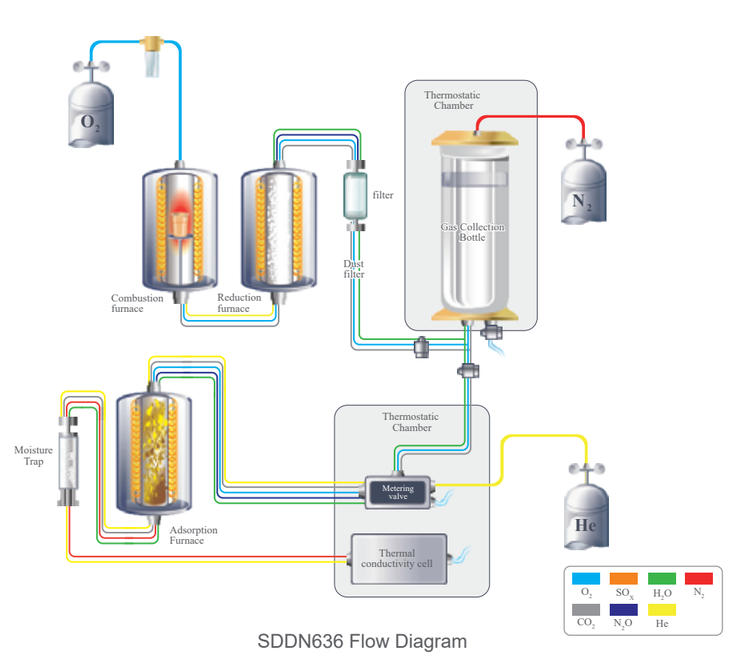
High-efficiency analysis with customizable methods.

- Independent combustion parameters can be set for different sample types. Methods can be customized, saved, and recalled with one click. Single sample analysis takes only 3–4 minutes, delivering exceptional efficiency in high-throughput testing scenarios.

High-precision gas control system combined with high-temperature combustion pyrolysis technology ensures excellent precision and accuracy of test results.

Vertical floor-standing design, no benchtop space required.

- Equipped with high-quality rollers and locking devices at the base for flexible mobility or secure positioning.



SDDN636 Flow Diagram