

ECS 8060 N,Protein Analyzer

ECS 8060 is a Nitrogen, Protein Analyzer Model making use of the Dumas combustion method.

ECS 8060 is a state-of-the-art instrument for the elemental analysis based on sample combustion and separation of gases.

The N_2 combustion product is quantified by a high resolution TCD detector.
 CO_2 is trapped in the innovative Zeoquantum system while H_2O is condensed by specific Permapure trap.

Fully automatically operated: from the available samplers to the oxygen dosage, from the monitoring of consumables status to the zeolite regeneration system.

ECS 8060 Model is composed by:

- ✓ Dual furnace combustion system (for a better combustion and optimization of catalysts)
- ✓ Water extraction system by Permapure and water trap
- ✓ Carbon dioxide adsorption system by Zeoquantum
- ✓ Detection system
- ✓ Data acquisition and handling.



Very versatile, it is very useful for analysis of a wide range of sample types and sizes - both liquids and solids, from micrograms to grams of organic materials. Thanks to the absence of a GC column, sample weight limits are wider.

Pneumatic, electric and manual samplers and high quality consumables are available.

Automatizations make ECS 8060 particularly user-friendly: the automatic oxygen dosage system allows a better consumption of oxygen and consumable status monitoring function optimizes the catalysts to be used.

By the Zeoquantum CO₂ adsorption system a large amount of carbon dioxide can be treated by an automatic regeneration system – resulting in more precision, greater performances in a shorter time. When used in a C-N configuration, the simultaneous determination of nitrogen and carbon is attained.

The exclusive designed TCD -Thermal Conductivity Detector -is self-calibrating so that no reference gas is needed.

The ECS 8060 is particularly suitable for linking to other units for determination of the isotopic ratios of carbon stable isotopes.

FEATURES AND BENEFITS

- **Fully automated** analysis system
- High **sensitivity, accuracy** and **precision**
- Application **flexibility** and **versatility**
- **Zeoquantum** CO₂ adsorption and desorption
- **Simultaneous nitrogen** and **carbon** determination
- **Powerful software** for results visualization from PC
- **Touch-screen display** for an easy settings management
- **Consumables status monitoring** for an optimization of catalysts usage
- **Three types of samplers** available : electronic, pneumatic, manual type
- **Easy connection** to Mass Spectrometers and other detectors for carbon stable isotopes analysis
- **Low operation and management costs**



Analytical and Technical Features

ECS 8060 Features

| | |
|---|--|
| Type | N - Proteins |
| Analysis Time | N – from 4 min up to 8 min |
| Analytical Range | From 0,002 up to 20 mg |
| Accuracy* | <0,2% (certified standard; purity >99.9%) |
| Precision* | <0,1% (certified standard; purity >99.9%) |
| Sampler | Pneumatic autosampler 147 positions Electronic autosampler 32, 50 100 positions Manual sampler - |
| Dual Furnace System | |
| Safety Quick-fit | |
| Integrated water trap | |
| Zeoquantum CO ₂ adsorption and desorption system | |
| Touch-screen display | |
| Stand-by mode | |

* Accuracy and precision are related to samples nature and homogeneity.

Physical Specifications

| | |
|------------------|---|
| Dimensions | 98x50x37cm |
| Weight | 78kg |
| Power Supply | 230V, 50/60Hz |
| Absorbed Power | 5A, 1100W. |
| Gas Requirements | Helium (99.999% purity), 3-5 bars Oxygen (99.999% purity), 3-5 bars Air (oil free compressed air) |

Analytical Conditions

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|------------------------|---|
| Gas carrier | Helium |
| Leak test | Automatic leak test |
| Furnace temperature | Left furnace :1100°C max Right furnace: 1100°C max |
| Oxygen volume need | Automatically calculated by the oxygen doser |
| Flow Rate | Electronic flow rate control |
| Water trap | Efficient and easy maintenance |
| Detector | High Sensitivity TCD |
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| Software data analysis | EAS Clarity |
| Calibrations | Linear, Quadratic, cubic |
| Active calibration | As necessary |

Sample

| | |
|-------------|---|
| Sample size | 0.1-400 mg (depending on sample nature) |
| Sample type | Liquid Solid |
| Capsule | High purity tin and silver capsules |

Accessories

| | |
|------------------------------|------------------------------------|
| Kit | |
| Balance | |
| Consumables | Proprietary NC Technologies S.r.l. |
| Assistance by phone or email | within 24 hours |