

# ECS8040

ORGANIC ELEMENTAL ANALYZER



## NC TECHNOLOGIES

Innovative Elemental  $\mu$ -Analysis





ECS 8040 is a C-H-N-S-O Elemental Analyzer Model based on the Dumas combustion method.

ECS 8040 is a state-of-the-art system for the elemental analysis based on sample combustion and separation of gases with a chromatographic column.

The combustion products, i.e. CO<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub> and SO<sub>2</sub>, are separated and quantified by a high resolution TCD detector.

## Analytical and Technical Features

### ECS 8040 Features

Type	CHNS-O	
Analysis time	CN	5 min
	CHN	8 min
	CHNS	10/25 min
	O	4 min
Analytical range	C	0.002-20 mg
	H	0.002-5 mg
	N	0.002-20 mg
	S	0.002-6 mg
	O	0.002-2 mg
Accuracy*	<0.2% (certified standard; purity >99.9%)	
Precision*	<0.1% (certified standard; purity >99.9%)	
Sampler	Pneumatic autosampler	147 positions max
	Electronic autosampler	32, 50, 100 positions
	Manual sampler	
Singlefurnace system		
Safety quick fit system		
Touch screen display		
Standby mode		

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

### Physical Specifications

Dimensions	51x50x37 cm
Weight	53 kg
Power supply	230V, 50/60Hz
Adsorbed power	4A, 900W
Gas requirements	Helium (99.999% purity), 3-5 bar
	Oxygen (99.999% purity), 3-5 bar
	Air (oil free compressed air)

## Analytical Conditions

Gas carrier	Helium
Leak test	Automatic
Furnace temperature	Left Furnace : max 1100°C RightFurnace : max 1100°C
Oven temperature	Max 110°C
Oxygen volume need	Automatically calculated by the oxygen doser
Flow rate	Electronic Flow Rate
Gas separation	0.8-4 m GC Column
Detector	High Sensitivity TCD
Software data analysis	EAS Clarity
Calibration	Linear, Quadratic, Cubic
Active calibration	As needed

## Sample

Sample size	0.1-500mg (depending on sample nature) Up to 1 g for soil samples
Sample type	Liquid Solid
Capsule	High purity tin and/or silver capsule

## Accessories

Installation kit	Small samples; big samples; deluxe kit
Sampling kits	
Microbalance	Proprietary NC Technologies S.r.l. By email <a href="mailto:service@thermalindo.com">service@thermalindo.com</a>
Consumables	
Technical assistance	

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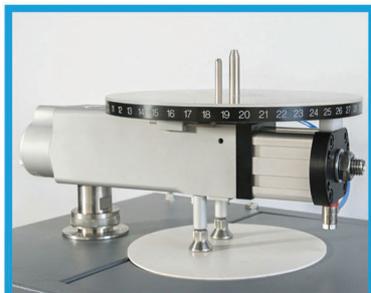
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## Three different samplers are available for ECS80 Series

- ✔ Set the samples table on your computer
- ✔ Specify the type and amount of sample for the automatic oxygen dosage
- ✔ Fast analysis
- ✔ Powerful software for data analysis and presentation



Pneumatic autosampler



Electric autosampler



Manual sampler

### **SAFETY QUICK FIT SYSTEM:**

Easy and safe management of reactor tubes and connections

### **CONSUMABLES STATUS MONITORING:**

Fixable usage period for consumables and automatic notices of consumables replacement

### **AUTOMATIC LEAK TEST**

### **COMBUSTION SYSTEM:**

Dual furnace combustion system up to 1100°C

### **GC OVEN AND COLUMN:**

Standard and customized column lengths

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