

Organic Elemental Macro Analyzer

MACRO CORDER

JM1000CN

Reliable technology



JM1000CN is the trace organic element determination analyzer based on Pregl-Dumas method as fundamental principle that determines concentrations of C (carbon) and N (nitrogen) simultaneously and efficiently by PC controlling.

Compared to conventional analysis methods, JM1000CN requires no skilled analytical techniques, only by operating for weighing the sample on the boat directly and it will be introduced into the combustion part, excellent analysis accuracy is obtained effectively.

By introducing cutting edge electronics technology, analysis results are obtained more easily, safely and economically.

Features

●Data processing and control via PC

Analyzer's operational control and data processing are totally controlled by Windows software. Auto-start and auto-stop are effectively controlled. Automatic unattended operation is available when the auto sample is combined.

●Reduction and altering analysis time

Analysis time can be modified and combustion time according to the sample is also easily settable.

●Big space of sample decomposition part

A large amount of sample will be weighed and analyzed, so it will be performed sample analysis accurately. Analysis is available without regard to state of sample, such as liquid, solid and/or their mixtures.

●Safe and user-friendly operation via PC control

Monitoring and controlling continuously for gas pressure, respective furnace, temperatures at thermostats, baseline and analysis data.

●Built-in diagnosis function for automatic gas leakage

Gas leak test will be implemented automatically via PC. Flow path will be adding pressure and pressure lowering is measured by digital pressure meter. Gas leak places will be diagnosed by its measured result.

Specifications	
Organic Elemental Analyzer	MACRO CORDER JM1000CN
1 Element	Carbon, Nitrogen
2 Method	Self-integration method (uses piston pump)
3 Accuracy	Absolute error, within +/- 0.3%
4 Sample volume	Organic compound: max. 500 mg Inorganic compound: max. 1000 mg Aqueous solution: max. 1 ml
5 Range	C: 0.2 to 125 mg N: 0.02 to 12 mg *By modifying analysis conditions, upper and lower range limits can be extended.
6 Analysis time	10 min. per sample
7 Combustion unit:	
7-1. Sample combustion:	By flush heater
7-2. Oxidation furnace:	Setting at 850°C (normal setting)
7-3. Reduction furnace:	Setting at 550°C (normal setting)
7-4. Combustion tube:	Transparent quartz glass
7-5. Reduction tube:	Transparent quartz glass
7-6. Absorption tube:	Hard glass
8 Combustion gas collecting function:	By stainless piston pump, 500 ml
9 Detectors:	
9-1. Detectors:	Thermal conductivity detectors (TCDs), 60Ω 4-element tungsten filament, 2 sets built-in
9-2. Detector thermostat:	At 100°C
9-3. Pump thermostat:	At 55°C
10 Sample boat:	Ni-boat, 100 mm length
11 Timer:	ON-OFF-ON-OFF timer, standard in-built
12 Computer:Laptop	OS: Windows10 Professional One serial port or USB to RS232 adapter
13 Other	
13-1. Alarm for malfunction:	Displays malfunction contents with alarm sound, and implements compulsory stop for the analyzer
13-2. Auto-analysis start:	At connecting the auto sampler, auto-analysis is started with chime sound, provided that the analyzer is stabilized and various conditions are satisfied.
13-3. Auto-stop:	After confirming all samples' analyses, cool down process is started automatically.
13-4. Self diagnosis:	Respective motion confirmation is available after initiating the check program
14 Power Requirement	AC100V, 4 kVA (2 kVA x 2) 50Hz or 60Hz
15 Dimension	760(W) x 585(D) x 485(H) mm
16 Weight	Approx. 90kg

Required item for start-up the JM1000CN

1 Balance	Semi-Micro
2 Helium and Oxygen	Purity >99.99%
3 Pressure regulator – Qty 2	400kPa, secondary pressure
4 4mmφ stainless steel and joints	By location

OPTION, Autosampler JMA-1000

1 Number of sample	Max. 49 sample boats. 10 sample boats per tray
2 Accessory	Sample boat Qty 50 (included)
3 Power Requirement	AC100V, 50/60Hz, 300VA
4 Dimension	900(W) x 590(D) x 470(H) mm
5 Weight	Approx. 40kg



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