

Elemental analysis has never been that easy!

SAMPLE	CARBON [%]	NITROGEN [%]	SULFUR [%]
CLAY	2.082 ± 0.014	0.188 ± 0.002	–
SAND	0.822 ± 0.004	0.064 ± 0.004	–
SOIL	1.14 ± 0.004	0.103 ± 0.002	0.023 ± 0.001
WHEAT FLOUR	40.7 ± 0.02	1.88 ± 0.003	–
GRASS	30.5 ± 0.05	2.81 ± 0.018	2.55 ± 0.079
RAPE SEED	58.3 ± 0.10	2.96 ± 0.056	0.357 ± 0.014
SILAGE	43.2 ± 0.02	2.66 ± 0.01	0.22 ± 0.01
MALT	41.9 ± 0.05	1.75 ± 0.011	–

Sample weight between 150–1200 mg

INDUSTRY-PROVEN CONVENIENCE

The upright, open crucible design ensures a facilitated, fast handling of any kind of sample. Liquid sample preparation is now as easy as pouring a glass of water. No further absorbers or complicated liquid alignment systems are necessary. Moreover, after complete combustion a robotic arm automatically removes the crucible containing ashes from the furnace. Regarding high ash containing samples such as soils or sediments, this drastically increases instrument uptime.

TRUSTFUL QUALITY

Our consumables and spare parts are designed to meet the highest quality standards and reliability. They are certified and validated in accordance with international norms and standards. Whether it is FDA 21 CFR part 11, CE or ISO 9001 – Elementar applies the tightest international regulations governing quality control and product safety.

IDEAL SOLUTION FOR

- Chemical contract laboratories
- Soil and plant research groups
- Fertilizer producers

SAMPLE TYPES ANALYZED

- Soil
- Plants
- Fertilizer
- Chemicals



High sample throughput

Designed for 24 / 7 unattended operation. Industry-leading system uptime for highest laboratory efficiency.



Great flexibility

Wide range of optional conversion kits available for special applications. Upgradeable at any time.



High data quality

Outstanding precision and accuracy through high performance combustion. Matrix-independent results. Longterm stability of calibration.



Ease of use

Easy, labor-saving instrument operation and sample preparation. Simplified maintenance.

Elementargroup – your partner for elemental analysis

Elementargroup is the world leader in high performance analysis of organic elements. Continuous innovation, creative solutions and comprehensive support form the foundation of the Elementar and Isoprime brands ensuring our products continue to advance science across agronomy, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

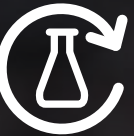
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elementargroup.
elementar | isoprime

vario MAX cube

A new dimension in throughput



High sample throughput




Great flexibility



High data quality



Ease of use

vario MAX  cube



vario MAX cube

*Outstanding
sample flexibility*

KEY FEATURES

- Simplified sample preparation
- Sample size / volume up to 5 g / 5 ml
- Helium or argon as carrier gas
- Outstanding robustness
- 10 year warranty on furnace and thermoconductivity detector cell
- Automatic ash removal

Simplified sample preparation

Save valuable time in sample preparation. Thanks to the broad sample weight range of up to 5 g / 5 ml, the vario MAX cube is the perfect instrument to handle any inhomogeneous substance. Grinding or milling can therefore often be omitted without affecting reliable data quality. Simply weigh in the solid or liquid samples into reusable crucibles, place them on the autosampler and start the sequence. The unique post-combustion technology ensures the complete digestion of challenging species.

Always the right configuration

The vario MAX cube can be setup in N, CN or CNS mode to ensure an optimum configuration, tailor-made to customer demands. Concerning soil analysis the most common approach is to run the analyzer in CN or CNS mode. Elementar also offers optional semi-automatic total inorganic carbon (TIC) determination in solids.

HIGH-TEMPERATURE COMBUSTION



All elemental analyzers from Elementar are designed for minimal sample preparation and secure, unattended 24 / 7 operation. They use the safe, simple and environmental friendly high-temperature combustion principle. The proven Elementar furnace technology combined with efficient oxygen dosing guarantees quantitative conversion of the sample to measuring gas – a prerequisite for highly precise and matrix-independent elemental analysis.

With the vario MAX cube, Elementar introduced the most innovative elemental analyzer that incorporates an automated ash removal technology. Designed for 24 / 7 operation, the instrument addresses any high throughput laboratory facing larger sample weights and significant ash content. Customers can now rely on unattended overnight operation of such applications to maximize sample throughput and increase laboratory efficiency.

④ Automatic sample introduction and ash removal via a robust, maintenance-free robotic arm.

④ The upright crucible design is perfect for liquid and solid samples.



MAXimum independence

The vario MAX cube may be either operated on helium or argon as carrier gas without hardware changes. Absolute independence of rising helium prices or uncertainties in supply. Utilization of inexpensive argon yields even lower price per analysis.

Future-proof investment

Thanks to the outstanding robustness and longevity for all elemental analyzers a 10 year warranty on furnace and thermoconductivity detector (TCD) cell is granted. With our well-known long term oriented dedication to technical support Elementar provides spare parts for a minimum of 10 years after the end of production. This results in outstanding low total cost of ownership and gives customers confidence in return of investment.

ADVANCED PURGE AND TRAP



Elementar's proprietary APT technology is the leading chromatographic technique for the determination of non-metal elements. In conjunction with the detection of the complete combustion gas without gas splitting and dilution, the APT technology is capable of resolving e.g. C / N ratios of up to 7000 : 1. The distinct peak separation assures absolutely reliable and trouble-free data acquisition. The data analysis can therefore be easily automated for larger sample amounts while maintaining highest possible data quality and accuracy. Elementar's unique purge and trap columns are optimized to provide unmatched robustness and longevity compared to GC columns. Furthermore, they can be loaded up to 250-fold higher, resulting in outstanding sample flexibility. The analysis of samples with an absolute carbon content of up to 500 mg is therefore possible. Thus, customers enjoy industry-leading accuracy, sensitivity and versatility.