

vario MICRO cube

Enter the world of elemental analysis



High data quality



Low cost of ownership



Extreme durability



Ease of use

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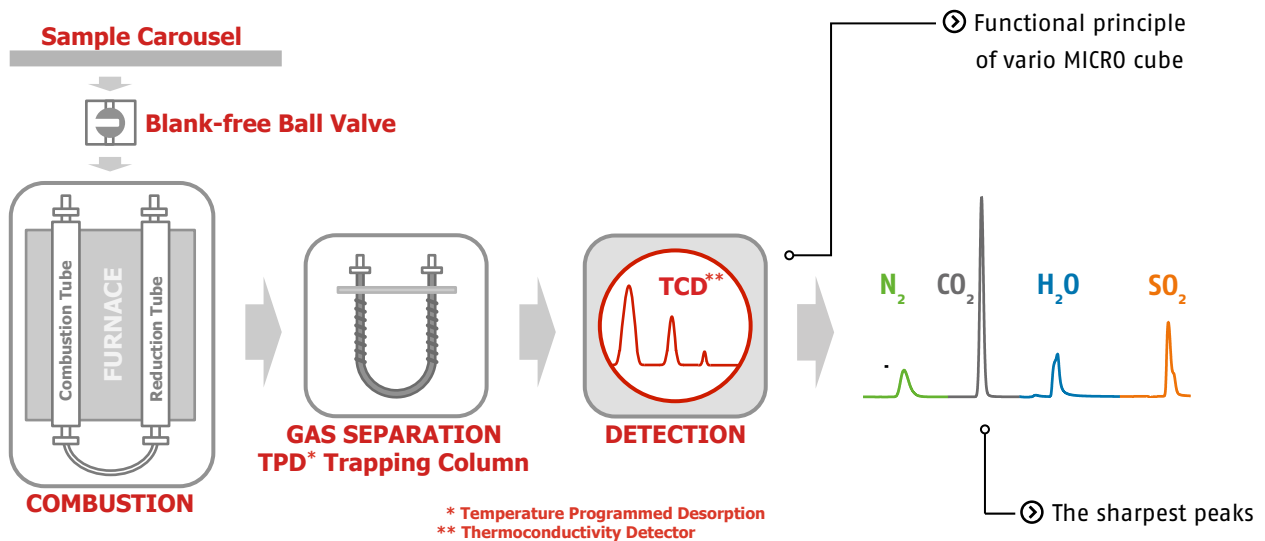
*The workhorse
in chemical laboratories*

KEY FEATURES

- Outstanding robustness
- Low maintenance
- 10 year warranty on furnace and thermoconductivity detector cell
- Low total cost of ownership
- Reliable results even for sub-milligram samples
- Integrated 120 position autosampler as standard
- Patented ball valve for blank-free sample transfer
- Argon as alternative carrier gas

The vario MICRO cube is the entry-level elemental analyzer combining reliable results with outstanding robustness. It utilizes Elementar's proprietary Advanced Purge and Trap technology with a single

Temperature Programmed Desorption (TPD) trap column. Thus, the instrument is capable of determining samples with C : N elemental ratios of up to 5000 : 1.



Reliable results

The vario MICRO cube guarantees outstanding precision and accuracy through quantitative combustion via oxygen jet-injection directly into the active zone. This leads to matrix-independent results even for samples which are difficult to combust. In combination with the state-of-the-art thermoconductivity detector, the instrument provides an elemental detection limit of < 50 ppm.

Ease of use

The vario MICRO cube is optimized to significantly simplify daily routine operation. Clearly arranged, easily accessible system components as well as a furnace that slides out minimize maintenance efforts. The tool-free clamp connection system ensures a reliably leak-tight instrument at any time. Thus, customers can enjoy smooth analyses and confidence in their results.

Future-proof investment

Thanks to the outstanding robustness and longevity, all combustion analyzers include a 10 year warranty on furnace and thermoconductivity detector (TCD) cell. With the confidence that you will receive the highest level of technical support from our experienced team, Elementar provides spare parts for a minimum of 10 years after the end of production. This results in outstanding low cost of ownership and gives customers confidence in return of investment.

Made in Germany

All elemental analyzers are developed and manufactured in-house at the Elementar headquarters – high quality German engineering. High performance components and strict quality control ensure industry-leading quality and reliability. Designed for easy laboratory integration, features such as automatic weight transfer from balance or LIMS integration are readily available. We have fully and wholeheartedly devoted ourselves to elemental analysis – in your interest.

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.

TEMPERATURE PROGRAMMED DESORPTION (TPD)



Elementar's proprietary TPD 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 TPD technology is capable of resolving e.g. C : N ratios of up to 5000 : 1 and C : S ratios of up to 4000 : 1. The distinct peak separation assures absolutely reliable and trouble-free data acquisition. Data analysis can therefore be easily automated for larger sample amounts while maintaining highest possible data quality and accuracy. Elementar's unique TPD columns are optimized to provide unmatched robustness and longevity compared to GC columns. Furthermore, the vario MICRO cube can be loaded up to 4-fold higher, resulting in outstanding sample flexibility. The analysis of samples with an absolute carbon content of up to 7 mg is therefore possible in CHNS mode. Thus, customers enjoy industry-leading accuracy, sensitivity and versatility.

Elemental analysis has never been easier!

SAMPLE	CARBON [%]	HYDROGEN [%]	NITROGEN [%]	SULFUR [%]
L-CYSTEINE	29.78 ± 0.04	5.79 ± 0.01	11.57 ± 0.05	26.49 ± 0.07
MELAMINE	28.54 ± 0.05	4.75 ± 0.05	66.49 ± 0.14	-
UREA	19.97 ± 0.05	6.58 ± 0.02	46.53 ± 0.10	-
SULFANILIC ACID	41.54 ± 0.03	4.01 ± 0.01	8.14 ± 0.02	18.51 ± 0.01
BENZYL-CYSTEINE HCl	52.97 ± 0.06	6.85 ± 0.01	6.82 ± 0.02	15.52 ± 0.02
METHIONINE	40.16 ± 0.05	7.36 ± 0.01	9.38 ± 0.08	21.42 ± 0.08
TEFLON	24.51 ± 0.12	-	-	-
PVC	40.40 ± 0.05	5.13 ± 0.04	-	-
N-F-DIBENZOL-SULFONIMIDE	4.47 ± 0.01	45.62 ± 0.08	3.19 ± 0.01	20.32 ± 0.10

Sample weight between 0.5–6 mg

ONE INSTRUMENT FOR MULTIPLE TASKS

For the determination of very low S concentrations down to 2 ppm, the vario MICRO cube can be equipped with an optional IR detector even in CHNS mode. Even oxygen and chlorine can be detected. All optionally available conversion kits allow upgrading the vario MICRO cube at any time for special applications.

QUALITY YOU CAN TRUST

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. We do not compromise on quality of our parts and chemicals – this is the prerequisite of a guaranteed long lifetime of our instruments.

IDEAL SOLUTION FOR

- Pharmaceutical laboratories
- Chemical contract laboratories
- Quality control laboratories
- Academic research groups

SAMPLE TYPES ANALYZED

- Chemicals
- Pharmaceuticals
- Polymers



High data quality

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



Low cost of ownership

Low consumables consumption and maintenance effort thanks to state-of-the-art technology and straightforward design.



Extreme durability

Outstanding robustness and longevity thanks to state-of-the-art technology. 10 year warranty on furnace and TCD cell.



Ease of use

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

Elementar – your partner for elemental analysis

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

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