

# Nitrogen analysis has never been that easy!

SAMPLE	N [mg/kg]	SD [mg/kg]	RSD [%]
POLYPROPYLENE GRANULATE	122	13	11
POLYETHYLENE GRANULATE	1985	25	1
POLYETHYLENE FOIL	56	4	7
HDPE GRANULATE	342	13	4
PARAFFIN OIL	11	1	7
GEAR OIL	610	5	1
ADDITIVE OIL	6708	59	1
2-ETHYL-HEXAONIC ACID	23	5	22

Sample weight between 13–20 mg

### EASE OF USE

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

### 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.

## rapid MICRO N cube

No compromises in nitrogen analysis



High sensitivity



High data quality



Low cost of ownership



Extreme durability

### IDEAL SOLUTION FOR

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

### SAMPLE TYPES ANALYZED

- Polymers
- Chemicals
- Oils
- Lubricants
- Additives



High sensitivity

Outstanding sensitivity thanks to high performance, state-of-the-art technology.



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.

### 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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# rapid MICRO N cube

*Matrix-independent,  
reliable results*

## KEY FEATURES

- Detection limit of 10 ppm
- Outstanding robustness
- 10 year warranty on furnace and thermoconductivity detector cell
- Low total cost of ownership
- Integrated 120 position automatic sampler
- Patented ball valve for blank-free sample transfer

## Outstanding sensitivity

With a detection limit of 10 ppm a sensitivity is reached that has been unknown for the Dumas method. By this, even traces of N in polymers, oils, lubricants and other industrial products can be reliably determined.

## Reliable results

With the rapid MICRO N cube, nitrogen is determined as  $N_2$  through a reduction tube. This makes the user independent of the matrix dependent formation of NO and guarantees the complete recovery of total nitrogen in the sample. For this reason a matrix dependent calibration is not necessary, the basic calibration is stable over a period of at least 3 months.

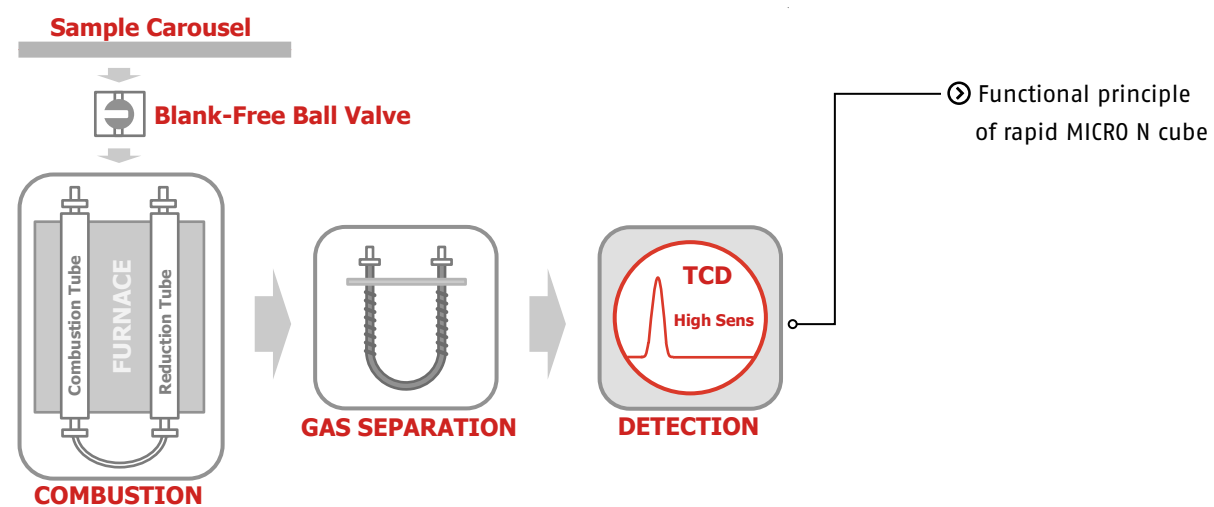
## DUMAS, THE METHOD OF CHOICE



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 Dumas principle. No boiling of concentrated acids, no hazardous waste and no extensive cleaning of glassware in contrast to chemical, time-consuming methods. Results including sample preparation and digestion in less than four minutes! In many application areas Dumas is the standard method.

Secure recovery or sensitive detection, this used to be the user's choice for the detection of low nitrogen contents in oils, polymers or chemicals. With the new rapid MICRO N cube, now customers can enjoy both at the same

time. A complete, matrix-independent recognition of all nitrogen components in the low ppm concentration range. This opens new analytical possibilities in the quality control of such substances.



## High sample throughput

The rapid MICRO N cube offers fast nitrogen determination. During operation all 120 sample positions are accessible and reloadable at any position and time. The instrument is designed for safe unattended overnight measurements. This allows for 200 measurements per day in routine operation.

## 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.

## HIGH-TEMPERATURE COMBUSTION



Elementar's high temperature combustion analyzers ensure an unmatched degree of automation combined with an outstanding ease of use. The easy access, open autosampler is reloadable at any position at any point in time and a patented blank-free ball valve system introduces the sample into the furnace without any required user intervention or surveillance. Industry-proven furnace technology in conjunction with efficient oxygen dosing guarantees quantitative conversion of the sample to measuring gas – a prerequisite for highly precise and matrix-independent elemental analysis. Customers enjoy unfailing, reliable workhorses explicitly engineered for high throughput and low maintenance.