

Oxygen analysis has never been that precise!

SAMPLE	O [%]	SD [%]
GASOLINE E5*	2.478	0.010
DIESEL B10*	1.096	0.009
PURE BIODIESEL*	11.172	0.027
OIL*	0.34	0.03
COKE	3.93	0.05
COAL	6.32	0.08
1-HEXANOL*	15.65	0.03
ACETANILIDE	11.97	0.05

Liquid and solid samples

*3-9 µL liquid injection with vario liquid sampler

Sample weight between 0.5-10 mg

EASE OF USE

The rapid OXY 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.

IDEAL SOLUTION FOR

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

SAMPLE TYPES ANALYZED

- Coal
- Petroleum products
- Chemicals
- Pharmaceuticals



High sensitivity

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



High data quality

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



High sample throughput

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



Extreme durability

Outstanding robustness and longevity thanks to state-of-the-art technology. 10 year warranty on 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 agriculture, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

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rapid OXY cube

Get OXYted about oxygen analysis



High sensitivity




High data quality



High sample throughput



Extreme durability

rapid OXY  cube



rapid OXY cube

Oxygen analysis has never been more reliable!

KEY FEATURES

- Industry-leading performance
- Blank-free oxygen detection
- Outstanding robustness
- 10 year warranty on thermo-conductivity detector cell
- Integrated 120 position autosampler as standard
- Patented ball valve for blank-free sample transfer

Reliable results

The rapid OXY cube ensures highly reliable results through its innovative backflush technology. Analytical results are always accurate and precise, as gaseous interferences from the pyrolysis reactor are excluded. This results in measurement accuracies of $< \pm 0.1\%$.

Great flexibility

The rapid OXY cube utilizes superior purge and trap separation of the analysis gas, thus creating a large dynamic measurement range. Sample weights of below 1 mg as well as up to 300 mg are possible. In addition, the instrument can be easily retrofitted to measure liquid samples.

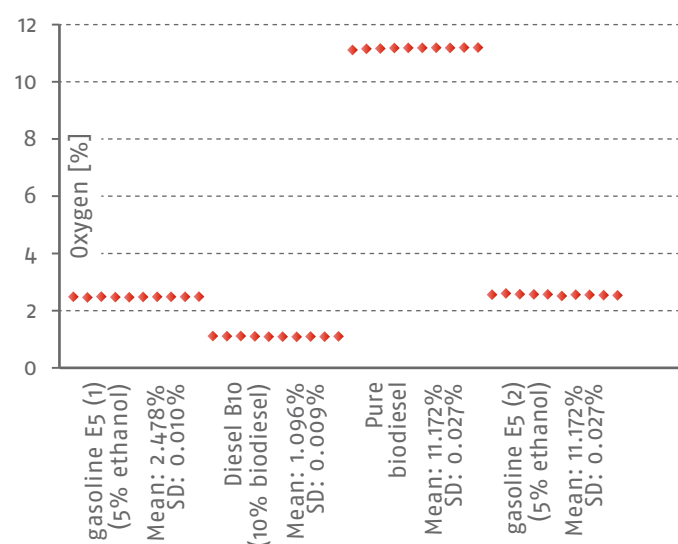
PYROLYSIS



Oxygen concentration analysis relies on the conversion of sample oxygen to carbon monoxide following the temperature-dependent Boudouard equilibrium, which favors the formation of carbon monoxide over carbon dioxide with increasing temperature during pyrolysis. Therefore, a full conversion of sample oxygen to carbon monoxide requires furnace temperatures in excess of 1,400 °C. The rapid OXY cube is a designated elemental analyzer for extremely precise and matrix-independent oxygen concentration measurement through high temperature pyrolysis at 1,450 °C.

Precise oxygen analysis does not have to be complicated. The new rapid OXY cube perfectly adapts to your analytical demands in oxygen concentration measurement. With our patented backflush technology, you no

longer have to worry about distortion of your analytical results through interfering gases. The new rapid OXY cube combines highest accuracy with unmatched operating comfort and great durability.



Ⓢ Reproducibility of oxygen concentration measurement of liquid fuel samples using rapid OXY cube equipped with vario liquid sampler (VLS).

High operating comfort

The rapid OXY cube stands for unmatched user-friendliness and is optimized for unattended overnight operation. A high level of automation guarantees ease of use for all fields of application at any point in time.

Extreme durability

The rapid OXY cube is outstanding in terms of low consumption of consumables. The pyrolysis reactor may be used for several thousand samples. This drastically reduces maintenance efforts and increases laboratory efficiency.

ADVANCED PURGE AND TRAP



Elementar's proprietary APT technology is the leading gas separation 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 oxygen content of up to 6 mg is therefore possible. Thus, customers enjoy industry-leading accuracy, sensitivity and versatility.