

# inductar<sup>®</sup> EL cube

*Cubed technology to certify metals*



High sensitivity



High data quality



Extreme durability



Great flexibility

inductar EL  cube

# inductar **EL** cube

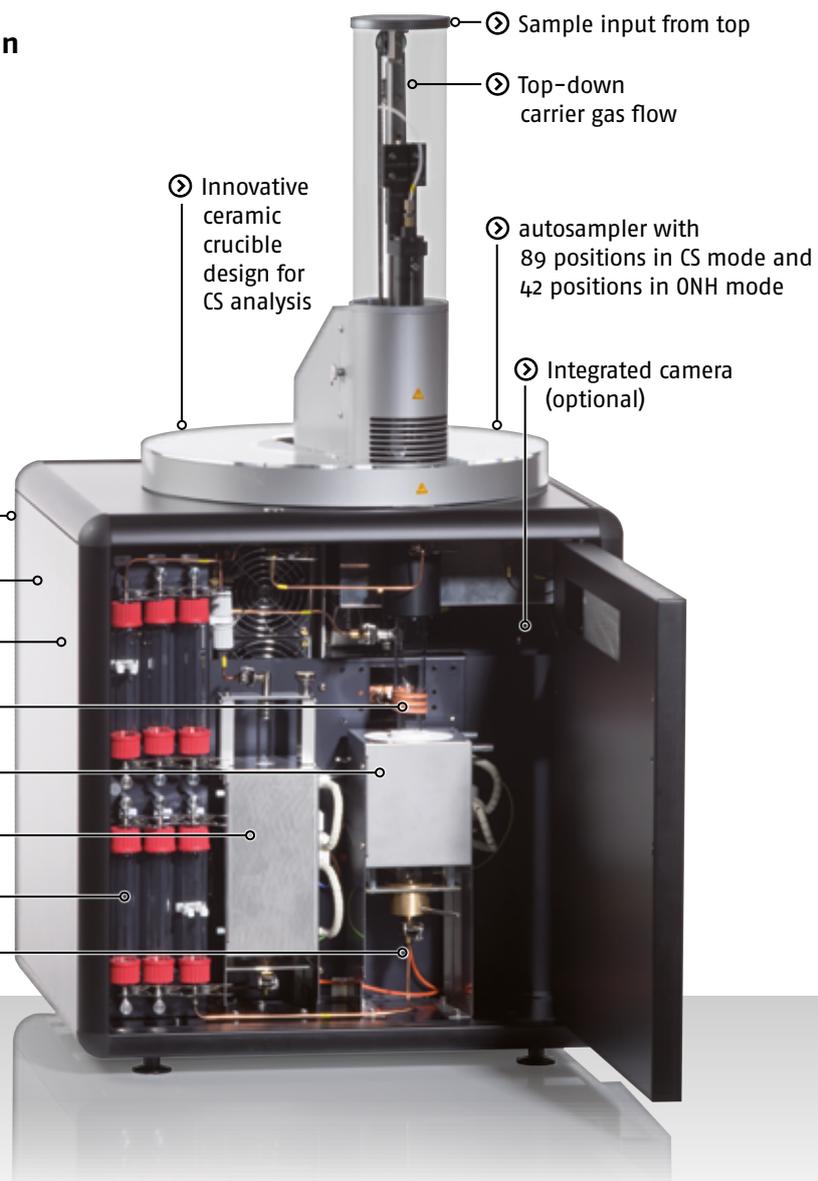
*The world's first  
5 element analyzer for metals*

## KEY FEATURES

- Industry-leading flexibility to cover all applications
- Manual or automated with up to 89 sample positions for secure and unattended operation
- Solid-state technology for long-living induction furnace
- Gas-tight clamp connection system ensures easy maintenance
- Intuitive and feature-rich software makes operator's life incredibly simple

Based on Elementar's experience of more than 110 years in development and manufacturing of elemental analyzers, an innovative high-temperature CS/ONH analyzer for metals and other inorganic materials was designed. The new instrument is equipped with a solid-state induction furnace for both CS and ONH analysis, which makes it possible to analyze all five elements via a single analyzer.

- Ⓢ C, S, O: wide-range infrared detector
- Ⓢ N: thermal conductivity cell
- Ⓢ H: electronic hydrogen sensor
- Ⓢ Solid-state induction furnace
- Ⓢ Heated dust filter in CS mode
- Ⓢ Efficient oxidation
- Ⓢ Drying agents with indicator
- Ⓢ Tool-free maintenance



## Innovative ideas

For the first time, a powerful but energy-efficient solid-state induction furnace enables extremely high temperatures up to 3000 °C. Combined with high-performance detectors, the inductar EL cube shows excellent accuracy and outstanding reliability.

## Automated Analysis

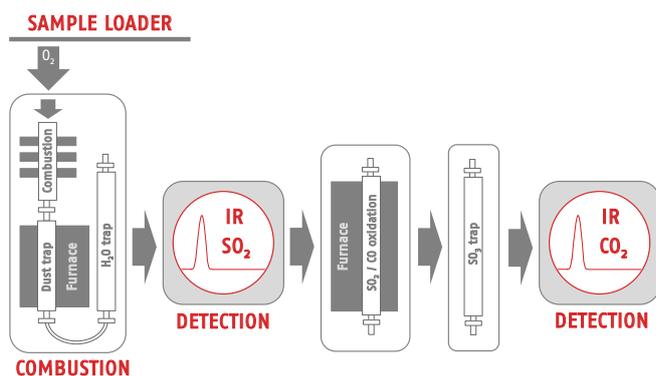
The fast and precise autosampler with its innovative robotic arm (patent pending) allows unattended operation. The sequence of all sample positions is user configurable and can be changed at any time. Automation is further accomplished by automatic weight transfer from balance, barcode reader support and easy LIMS integration. The inductar EL cube is easy to use and configurable to fulfill all requirements in R & D, quality control, and high-throughput laboratories.

## CS ANALYSIS

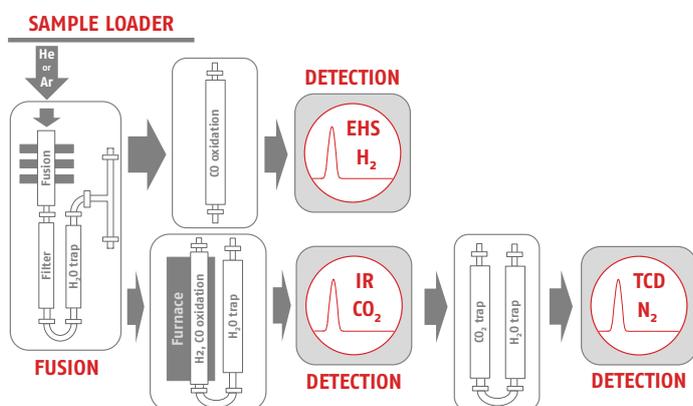
In a pure oxygen atmosphere, the sample is introduced to the induction furnace. Unlike conventional systems, the inductar-series feeds the sample from the top. The high temperature in the furnace converts the traces of sulfur and carbon from the sample into sulfur dioxide, carbon monoxide and carbon dioxide. After detection of the sulfur dioxide using an IR detector, the carbon monoxide is quantitatively oxidized to carbon dioxide. After removal of sulfur trioxide the carbon dioxide is detected via a second IR detector.



## CS Mode



## ONH Mode



## ONH ANALYSIS

For the first time it is technologically possible to use induction heating also for ONH analysis. By using smart instrument design and modern induction technology, the required temperatures can be reached at the sample. Up to 3,000 °C are necessary to melt the sample and release the gases of interest. In combination with new detection techniques (patent pending), sample introduction procedures and gas flow schematics, a simple to use instrument enables the user to reach the best detection limits. Fast analysis with manual or automated sample feeding are possible.



# Metal analysis has never been more flexible!

Clearly arranged and easily accessible components for fast and easy maintenance.



## EASE OF USE

The inductor EL cube is optimized to significantly simplify the daily routine operation. Clearly arranged, easily accessible system components and the long-life combustion tubes 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 low instrument-handling time.

## 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

- Research institute
- Foundry
- Steel mill
- Automotive industry
- Aerospace industry

## SAMPLE TYPES ANALYZED

- Steel
- Cast iron
- Refractory metal
- Ceramic
- Other metals and inorganics



### High sensitivity

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



### High data quality

Outstanding precision and accuracy through high performance combustion. Long-term stability of calibration.



### Extreme durability

Outstanding robustness and longevity thanks to state-of-the-art technology.



### Great flexibility

Wide range of materials analyzable.

## 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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