

## INNOVATIVE PHOTONIC TECHNOLOGY

The smart clean sensors developed by iUMTEK are based on Laser Induced Breakdown Spectroscopy (LIBS) technology.

The LIBS technology is a real-time method for elementary analysis of all types of materials, without prior preparation, regardless of its state (liquid, solid or gas), and optical lenses which is focused on the analyzed material and creates a plasma and photon emissions. This light-matter interaction results in data that can be qualitative and / or quantitative. The ergonomic and intuitive HIM software interface, as well as the automation of the data acquisition system proposed by iUMTEK ensure safe use.

For further information: <https://iumtek.com/libs>.

### iUMTEK has a team of experts in:

- Mechatronics-photonics
- Embedded software
- Data processing
- Analysis Protocols



COMPLEMENTARY TECHNIQUES: XRF, ICP-AES, Raman

### OUR PARTNERS



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## TX 1000 ANALYZER



A Cleantech enterprise for real-time analysis of elementary chemical elements



The TX 1000 analyzer designed and manufactured by iUMTEK is a versatile instrument for the detection of elementary chemical elements which allows fast and reliable identification in solids, liquids and gaseous media. This solution enables real-time diagnosis at the heart of the industrial processes.

DETECT

ANALYZE

CONTROL

QUANTIFY

### ADVANTAGES

- Fast results with no sample preparation
- No waste
- Robust & versatile instrument
- On-site analysis (site pilote)
- « Plug & Play »
- Decision aid Tool
- Easy of use

### MARKETS :

- Nuclear dismantling
- Materials expertise laboratories
- R&D laboratories
- Petrochemical industry
- Renewable energies
- Quality control
- Analysis of emissions in industrial smoke

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# SPECIFICATIONS

## TX 1000 ANALYZER

- Any type of sample analysis
- Multi-elemental analysis
- Allow the detection of all the periodic table elements
- No sample prior preparation of samples
- Analytical precision (from ppm to %)
- Fast analysis (in a few seconds)
- Layer to layer analysis
- Sample cleaning ability before analysis
- Nearly non-destructive analysis (crater diameter of ~150  $\mu$ m)
- Analysis chamber for solid samples
- Analysis kits for liquids, powders and gases (optional)

## PRISMA SOFTWARE

- Instrument control
- Assistance Tools for interpretation
- Quantification tools
- Chemo metric tools to create models
- HIM - Interface man to machine - Office

## TX 1000 ADVANTAGES

- Control card
- Mastery of analysis parameters
- Automated instrument
- Easy of use / Expert mode
- Self-test



## A team at your service:

iUMTEK's mission is to design real-time industrial in-situ chemical analyzers. We also offer photonics and software module developments dedicated to specific business applications.

## OUR SERVICES

- On-site intervention
- Rental material for analysis campaigns

Entrust your sample to us  
When you need characterization test (on demand)

