GNR OPTICA

ANALYTICAL INSTRUMENTS GROUP

Horizon

Benchtop TXRF Spectrometer

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Horizon

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Horizon is the new Benchtop Total Reflection X-Ray Fluorescence Spectrometer (TXRF) manufactured by GNR for multi elemental qualitative and quantitative analysis for major constituents and ultra-trace in suspension as well as liquid samples.

Horizon instrument is the state of the art of the Total Reflection X-RAY Fluorescence Spectrometers and it is equipped with all the most modern technical components, which grant accuracy, precision, safety and easiness of use. It is a powerful tool for trace element analysis.

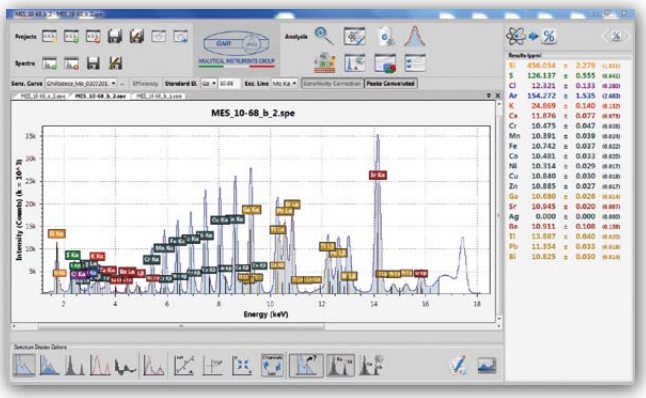
Main advantages of the TXRF method:

- No matrix effects
- Simple quantification using internal standard
- Calibration and quantification independent from any sample matrix
- Simultaneous multi-element ultra-trace analysis
- Minimal quantity of sample required for the measurement (5μl)
- Excellent detection limits (ppt or pg)
- Excellent dynamic range from ppt to percent
- Easy sample preparation
- Possibility to analyse the sample directly without chemical pre-treatment
- No memory effects
- Low running costs

Horizon Spectrometer components are mounted in a steel cabin shielded in accordance to the international X-ray safety rules, equipped with lead glass windows, flushing lamps and safety interlocks

Horizon is suitable for various sample type and applications:

- Environmental analysis
- Foods
- Nutrients
- Dietary supplements and beverage analysis
- Quality control of pure substances and industrial products
- Authentication in pharmaceutical and forensic laboratories
- Tissue and biological liquids in clinical chemistry



Analytical Software

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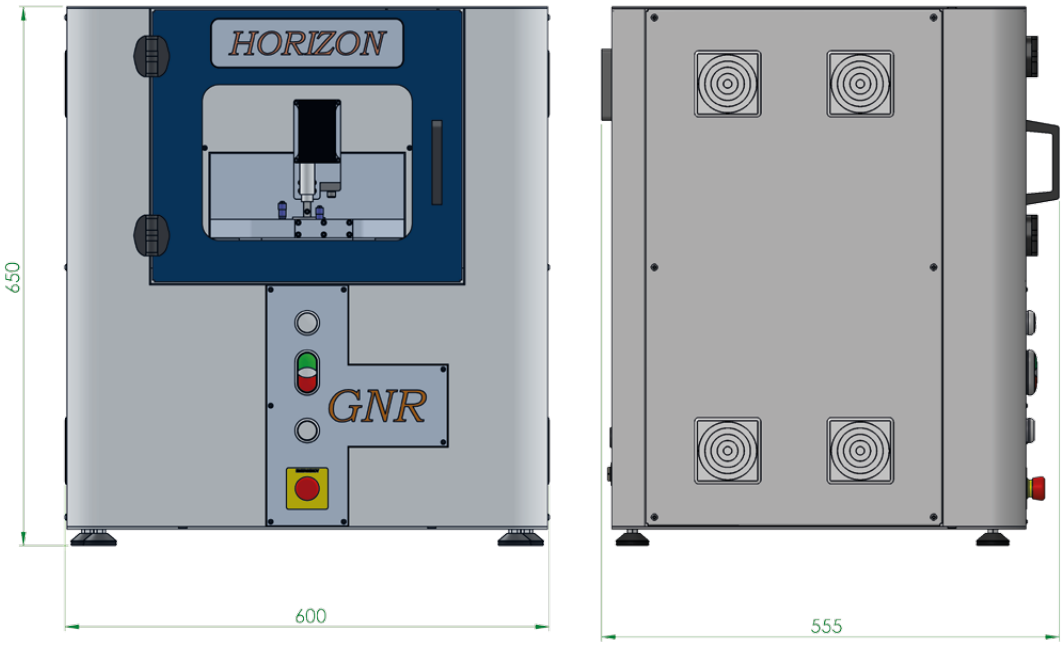
Technical Data

X-ray generator	600 W
Max. output voltage	40 kV
Max. output current	15 mA
X-ray tube	Mo anode provided as standard Other anodes available as options
Focus	0.4x8 mm FF (Fine Focus)
Silicon Drift Detectors (SDDs)	Active area: 25 mm^2 as standard (50 mm^2, 100 mm^2 as options) Energy resolution: Shaping time 1 μs: 124eV FWHM@Mn Kα
Multi sample holder	12 sample seating
Software	Measurement Software GNR Horizon (Acquisition and Analytical SW)
External dimensions	600 mm, 650 mm, 555 mm
Weight	85 Kg
Cooling water supply	External Compact Low Noise Version
Power Supply	90 - 250 Vac, single phase
Maximum power consumption (including water chiller)	2 kVA



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