

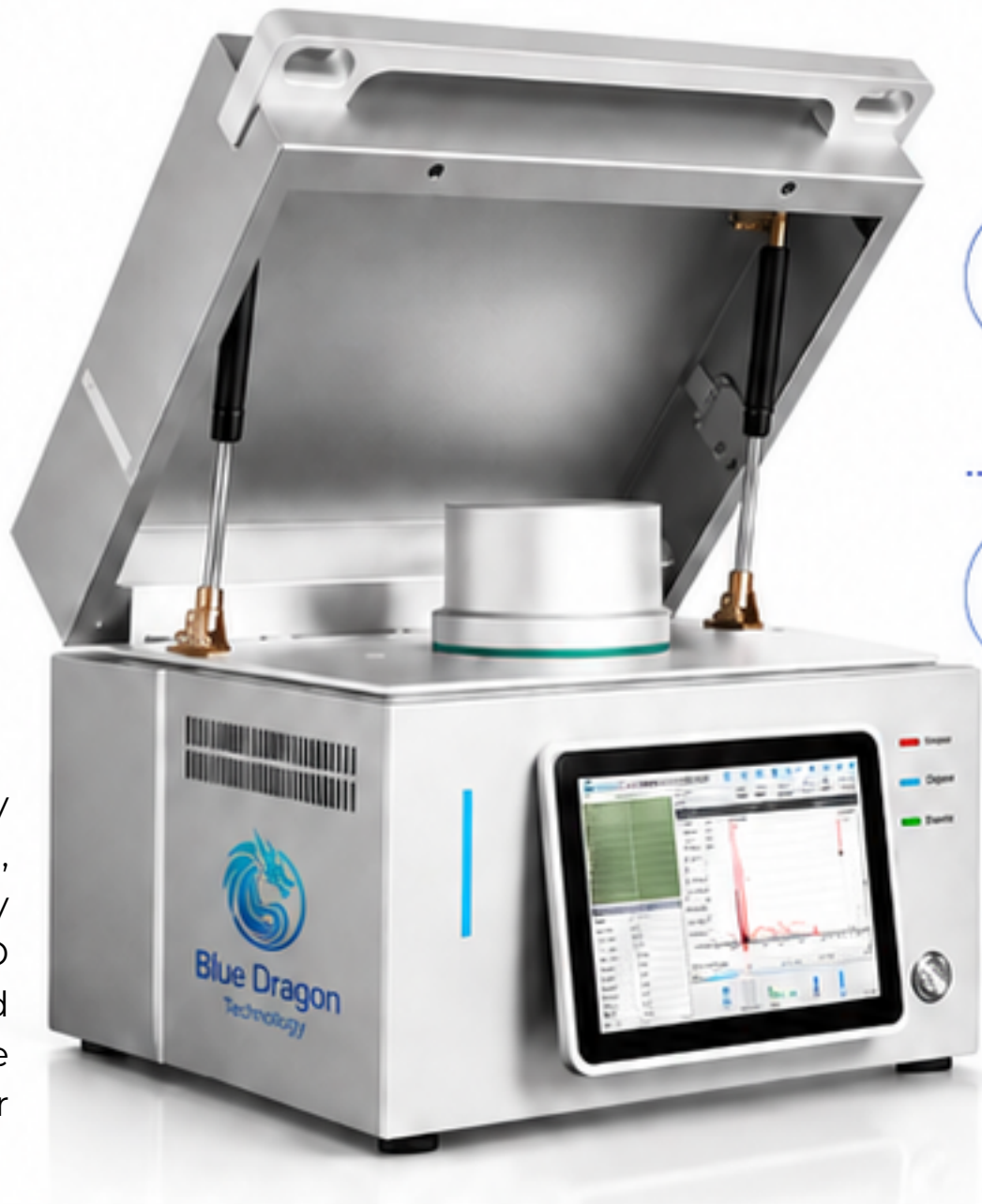
ELEMENTAL ANALYSIS SERIES

ELEMENTX B1

VACUUM BENCHTOP X-RAY
FLUORESCENCE SPECTROMETER

Precision Elemental Analysis for
Metals, Minerals, Powders, and
Laboratory Testing

The Blue Dragon ElementX B1 is a vacuum benchtop X-ray fluorescence spectrometer designed for rapid, non-destructive elemental analysis. Built for laboratory and quality-control environments, it combines a Fast-SDD detector, integrated touchscreen operation, and vacuum-assisted measurement to support accurate analysis across metals, minerals, powders, and other prepared samples.



Vacuum Benchtop
Analysis

Evacuated sample chamber improves light-element performance and measurement consistency.



Fast Digital
Results

Integrated touchscreen workflow with rapid analysis, spectrum review, and exportable reports.



Broad Materials
Coverage

Suitable for metals, minerals, powders, pellets, liquids, and environmental screening.

WHY CHOOSE THE ELEMENTX B1



Benchtop
Precision

Stable laboratory platform for repeatable elemental testing.



Fast-SDD
Detector

High-performance detection with nominal 129 eV ±5 eV resolution.



Non-
Destructive

Analyze samples without damaging the material.



Mg—U
Element Range

Broad elemental coverage for diverse analytical applications.



Integrated
Touchscreen

10.1-inch capacitive display with intuitive operation.



Digital
Reporting

Stores results and supports structured report output

APPLICATIONS



Alloy & Metal
Analysis

- PMI and composition verification
- Incoming / outgoing material checks



Mining & Mineral
Testing

- Ore and concentrate screening
- Process and grade-control support



Rare Earth &
Geological Samples

- Material identification
- Prepared sample testing



RoHS / Environmental
Screening

- Hazardous-substance screening
- Heavy-metal evaluation



Powder & Pellet
Analysis

- Prepared cup and pellet workflows
- Laboratory repeatability



Research & QC
Laboratories

- Method development
- Routine quality assurance

HOW IT WORKS



Prepare Sample

Prepare solid, powder, pellet, or liquid sample.



Place in Chamber

Position sample over the measurement window.



Vacuum Extraction

Evacuate chamber for improved light-element analysis.



X-Ray Excitation

Primary X-rays excite the sample.



Spectrum Analysis

Detector and software interpret the fluorescence spectrum.



Instant Result

Element concentrations are displayed, stored, and report-ready.

TECHNICAL SPECIFICATIONS

Measurement Principle	Energy-dispersive X-ray fluorescence (EDXRF)
Element Range	Mg to U
Concentration Range	1 ppm-99.9% (application dependent)
Detector	Large-area Fast-SDD, 129 eV ± 5 eV
X-Ray Tube	Tungsten target, 50 kV / 1 mA
Collimator	Single 6 mm aperture
Vacuum Pump	90 L/min precision pump
Display	10.1-inch capacitive multi-touch display
Analysis Methods	Fundamental Parameters (FP), empirical coefficient, working curve
Interfaces	USB 2.0 × 2, RJ45 × 1, vacuum-control interface × 1
Power Supply	AC 220 V ± 5 %, 50 Hz
Weight	Approx. 35 kg



BUILT FOR
LABORATORY ELEMENTAL ANALYSIS

- ✓ Accurate multi-element screening and quantification
- ✓ Improved light-element performance with vacuum chamber
- ✓ Suitable for metals, minerals, powders, and liquids
- ✓ Stable digital workflow with data storage and reports
- ✓ Designed for laboratories, quality control, and material verification

