D2 PHASER Desktop X-Ray Diffractometer

The D2 PHASER is a novel desktop analyzer that utilizes X-ray powder diffraction for qualitative and quantitative analysis of crystalline phases. The D2 PHASER is equipped with an integrated PC and a flat screen monitor. The new and very easy-to-use workflow software DIFFRAC.SUITE allows measurement and analysis right out of the box. Implemented with LYNXEYE™ compound silicon strip detector technology, the D2 PHASER is able to collect high quality data with unprecedented speed.

We implemented innovative technologies to make the D2 PHASER the most compact and fastest, all-in-one phase analyzer available on the market. The unit is mobile and easy to install with only the need for standard electrical power. It is therefore ideal for laboratory or on-location operation, in other words, it is a true Plug'n Analyze system.

Ease-of-use, high performance and low cost of ownership are the key features of the D2 PHASER. The D2 PHASER was developed to open new applications and markets beyond traditional XRD analysis. D2 PHASER – the price/performance leader for XRPD in laboratories and QC/PC applications for e.g. cement, industrial minerals, geology, chemistry, pharmaceuticals, as well as for educational purposes.

Plug'n Analyze™

On-Site Ready

Hand Carry Weight

No Water Supply

No High Power

No PC & Peripherals

Applications / Performance

DIFFRAC.EVA

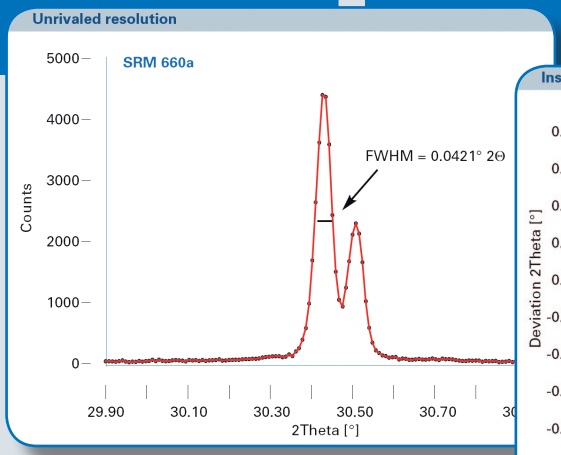
- Qualitative phase identification
  - ICDD PDF2 and PDF4
  - User-defined databases
- Semi-quantitative phase analysis
  - RIR method
  - Combined XRD-XRF analysis
- Publication-ready reporting

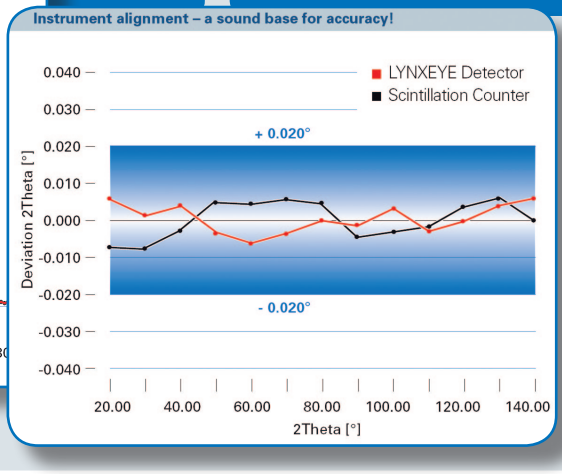
DIFFRAC.TOPAS Quantitative Analysis

- Quantitative phase analysis
  - Crystalline phases
  - Amorphous phases
- Degree of crystallinity determination
- Spiking method
- PONKCS method

DIFFRAC.TOPAS Structure Analysis

- Indexing (LSI and LP-Search methods)
- Pawley and LeBail fitting
- Rietveld structure refinement
- Ab-initio structure determination
  - Simulated annealing
  - Charge Flipping
  - 3D Fourier analysis
- Microstructure analysis





Technical Data	
Geometry	Theta / Theta
Max. useable angular range	-3 … 160 ° 2Theta (depending on detector)
Accuracy	± 0.02° throughout the entire measuring range
Achievable peak width	< 0.05°
Alignment	Not needed, factory aligned
X-ray wavelengths	Cr / Co / Cu, standard ceramic sealed tube
X-ray generation	30 kV / 10 mA
Radiation level	<< 1µSv/h
Detectors	Scintillation counter, XFlash® detector, 1-dimensional LYNXEYE
Sample motion	Spinner
Instrument type	Portable, desktop
Exterior Dimension	61 x 60 x 70 cm (h x d x w), 24.02" x 23.62" x 27.56"
Weight	95 kg
Power supply	90 – 250 V
External cooling water supply	None
Computer	Built-in, optional additional PC connected via LAN interface
Interfaces	2 x USB and 1 x LAN

Goniometer: US 7,852,983 B2

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