



## D2 PHASER

- The Second Generation Benchtop X-Ray Diffractometer

The new D2 PHASER is the next generation benchtop diffractometer for all X-ray powder diffraction applications. The new D2 PHASER is equipped with an integrated PC and a flat screen monitor. The new version of the DIFFRAC.SUITE software allows measurement and analysis right out of the box. Equipped with a LYNXEYE™ compound silicon strip detector, the D2 PHASER is able to collect high quality data with unprecedented speed. The new sample changer allows to run batches of up to 6 samples.

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 diffractometer 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.

## Applications / Performance

Plug'n Analyze™



On-Site Ready



Hand Carry Weight



No Water Supply



No High Power



No PC & Peripherals



### DIFFRAC.EVA

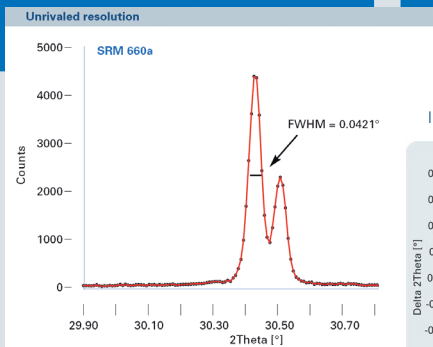
- Qualitative phase identification
  - ICDD PDF2 and PDF4
  - User-defined databases
- Semi-quantitative phase analysis
  - RIR method
  - Combined XRD-XRF analysis
- Publication-ready reporting

### DIFFRAC.TOPAS or DIFFRAC.DQUANT

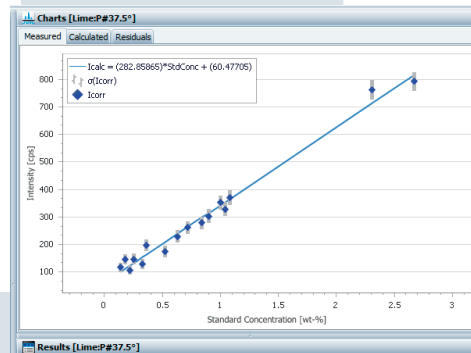
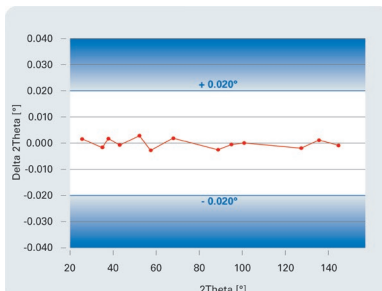
- Calibration method
- Addition method
- Ratio method
- Reach compliant methods
- Degree of crystallinity
- Spiking method
- PONKCS method

### 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



Instrument alignment – a sound base for accuracy!



### Technical Data

Geometry	Theta / Theta (sample remains horizontal)
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
Detectors	Scintillation counter, 1-dimensional LYNXEYE
Sample stages	- single sample stage for 51.5 mm Ø sample rings - automatic 6 position sample changer for 32 mm Ø sample rings
Sample motion	Spinning with user defined speed
Instrument type	Mobile, benchtop
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

## ● Bruker AXS GmbH

Karlsruhe · Germany  
 Phone +49 721 50997-0  
 Fax +49 721 50997-5654  
 info.baxs@bruker.com

[www.bruker.com](http://www.bruker.com)