



● The Bruker Guarantee

The Benchmark in X-ray Powder Diffraction Data Quality

Only the highest data quality can adequately represent both the value of your samples and your effort.

Bruker is committed to not only provide you with the best possible instrumentation, but also to certify both highest hardware and data quality. This is not only expressed by a smallest step size of $0.0001^\circ 2\theta$ but more importantly by an accuracy of $0.01^\circ 2\theta$.

Based on the Bruker Instrument Verification Booklet, each D4 and D8 diffractometer has to pass the strictest quality checks currently in place in X-ray powder diffraction. These tests provide you with the utmost assurance that you have purchased, and are using, the highest-quality X-ray diffraction equipment in the world. These quality checks include:

- NIST corundum standard SRM 1976a included with each new instrument (cut to fit into a standard sample holder)
- Instrument alignment $\leq \pm 0.01^\circ 2\theta$ over the whole angular range with reference to SRM 1976a at installation – guaranteed!
- Optional IQOQ procedures for regulated industries such as the pharma industry based on the instrument verification booklet.

Bruker's quality assurance measures give you the certainty that your data is correct.

Each single instrument has to successfully pass the Bruker instrument verification procedure since its introduction in 2003. Each system is delivered with the SRM 1976a standard reference material and each of them is capable of measuring peak positions equal or better than $\pm 0.01^\circ 2\theta$.

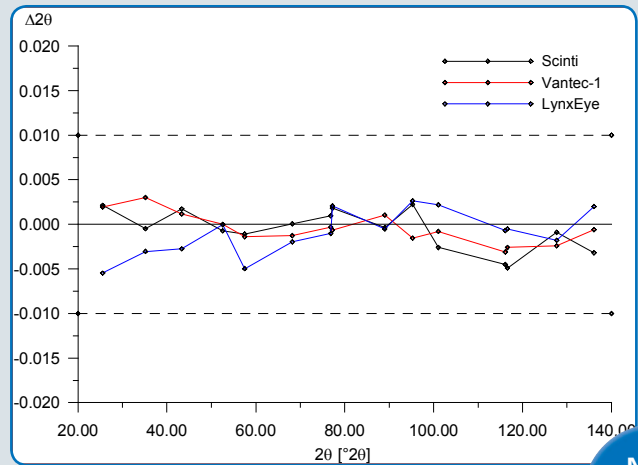
You should compare apples and lemons!

All powder XRD's are not created equal.

Performance is a critical issue in any XRD measurement and starts with the most advanced goniometer on the market. Bruker has this goniometer and it is used in every diffractometer system for powder and single crystal diffraction. Characteristic is its >280 mm globoid tooth gearing system for higher driving efficiency and higher load capacity. This not only provides for higher longevity and higher accuracy, it is also the base of a unique platform concept, which allows a free (re)configuration of any diffractometer system with all hardware components available from Bruker.

Supported by both high precision stepper motors and optical encoders, the system always "knows" its true position, and never has to search for it unlike other goniometers.

Naturally, zero maintenance is required.



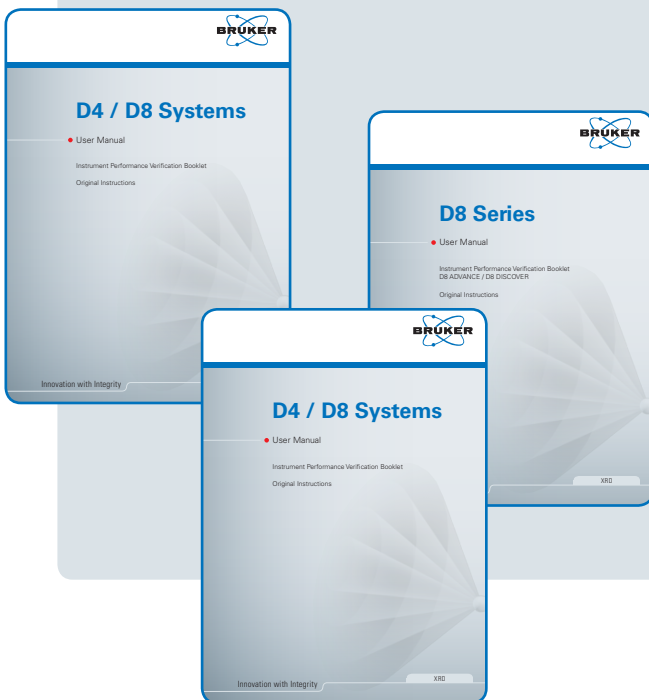
**NIST
SRM 1976a
included**

Get the best quality data you possibly can!

X-ray powder diffraction systems are expensive capital purchases. You deserve to have a system that produces the highest data quality. Bruker invites you to demand the best of your X-Ray equipment and therefore your X-ray vendor. Insist on $0.01^\circ 2\theta$ tolerances on peak positions for the SRM 1976a standard for your installation testing. It is the only way to truly determine if you are getting the quality you paid for and deserve.

" $\leq \pm 0.01^\circ 2\theta$ " is the Bruker guarantee – defining a new benchmark in data quality in X-ray powder diffraction!

Remember, that in the ICDD PDF a pattern is considered to be a high quality pattern if $\Delta 2\theta \leq \pm 0.04^\circ 2\theta \dots$



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