Start Your Journey with the
TELLUS XRD series

ACCESSORIES

Optics

Incident beam mask, Soller slits, divergence slit, direct beam absorber, set of alignment slits

Sample holders

Standard holders (deep and shallow cavities, perforated), Standard Reference material holder, glass holders

K-beta filter

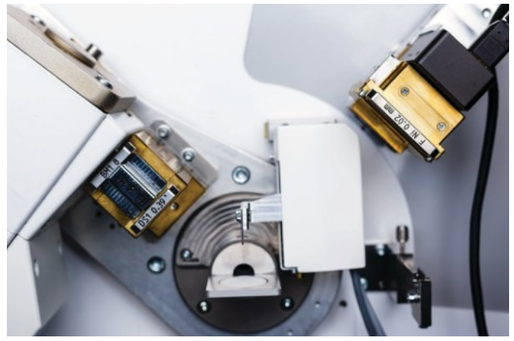
Ni 0.02 mm filter for diffracted beam

Standard Reference material

NIST 1976c

Optional Accessories

- Anti-scattering slit
- Zero diffraction plate
- Rotating sample holder
- Sample changer on 8 pcs
- Knife edge - collimator
- Heating chamber
- Variable divergence slit (VDS)
- Holder for the bulk samples



APPLICATIONS

- Science and education
- Geology and mining
- Cement industry
- Chemical industry
- Oil-gas exploration
- Forensic expertise
- Automotive industry
- Pharmaceutical and cosmetics industries
- And others.... (archeology, gemology, food industry etc.)

TECHNICAL DATA SHEET

Generator power	600/300 W (on request)
Target	Cu (Cr, Fe, Co, Mo – optional)
Cooling system	Internal water cooling: closed-circuit
Goniometer	Θ-Θ vertical, radius 150 mm
Scanning range	-6° ÷ +154° (2Θ)
Minimal step	0.001° (2Θ)
Positioning accuracy	+/- 0.01° (2Θ)
Scanning speed	0.01-600°/min
Dimensions (W x D x H)/Weight	700x700x820 mm/115 kg
Personal computer	PC with OS Windows
Interface	USB/Ethernet

LINEV SYSTEMS®
United for Innovation

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LL-C Certification 9001:2015 0911-AA12032026

TELLUS XRD series

Multi-function solution with exceptional materials research & analysis speed, reliability and reproducibilit X-ray difractometer that meets the highest requirements for this class of instruments and even exceeds expectations

X-RAY POWDER DIFFRACTOMETER

DESKTOP ANALYTICAL INSTRUMENTS

VERY USEFUL AND POWERFUL TECHNIQUE FOR

RESEARCH AND EDUCATION

ENVIRONMENTAL, GEOLOGY AND MINERALOGY

CEMENT AND OIL INDUSTRY

CHEMICAL PROCESS DEVELOPMENT, ANALYTICAL CHEMISTRY

QUALITY CONTROL

PHARMACEUTICALS, DRUG DISCOVERY

FORENSIC SCIENCE

LINEV SYSTEMS®
United for Innovation

From Classroom to Advanced Scientific Research:
Precision You Can Trust

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SOLUTION WITH OPPORTUNITIES OF ANALYTICAL TOOL AT A LOW COST

TELLUS is a compact and advanced tool designed for X-ray diffraction analysis. It is used for researching and identifying new compounds, as well as for quality control and determining the composition of different crystalline substances such as solid samples and powders.

TELLUS is a valuable asset in academic laboratories, enabling researchers to conduct precise studies on synthesized samples. It also aids students in quickly and effectively learning X-ray diffraction techniques.

The diffractometer can be equipped with either 1D or 2D photon counting Si detector with a pixel width of 50 µm providing fast and high-resolution measurements. Fast, robust and maintenance free detectors with 100% efficiency for X-ray radiation with minimum loss of intensity and maximum linear range. The high precision class gonniometer together with small pixel width of detector ensure the angle accuracy of better than ±0.01° (2). The instrument with proper optic components provides the peak width at least 0.05° 2θ over the full angular range.

The software interface with predefined experimental scenarios makes the measurement process clear even for new users, though the experts in XRD can create their own protocol. The software for analysis is based on the advanced analytical methods to make the quantitative and qualitative analysis of samples more precise.

Both the detector and the X-ray source have a long lifetime, what significantly reduces the maintenance costs and saves the budget.

	Mythen2 R 1D	MiniPIX TPX 3
Pixel size	50 µm by 8 mm	55 x 55 µm
Type / number of pixel	Linear 1D / 640	Matrix 2D / 250x250
Energy range (keV)	4 - 40	2 - 60
Detection mode	Single threshold	Two-threshold
Frame rate (Hz)	100	16
Cooling	Air	Air
Module weight (g)	100	41

KEY FEATURES

- Compact design
- Theta/theta geometry
- High effective detector
- Fast measurements
- High signal/noise ratio
- Long lifetime X-ray tube and detector
- No external cooling
- Safety guaranteed
- Analytical software

SOFTWARE PACKAGE

TELLUS XRD series

TELLUSCon

for system control and data acquisition

- Interface optimized for advanced and non-experienced users
- Measurement by steps or continuous scan
- Predefined measurement scenarios
- Data preprocessing
- Measurement report

SPECIALISED SOFTWARE

for advanced data analysis

- Data preprocessing (virtual monochromator, Lorentz-polarization factors correction, absorption correction, smoothing, background definition)
- Peak search and its identification
- Qualitative phase analysis
- Quantitative analysis with RIR and internal standard calibration methods
- Refinement of lattice parameters by whole pattern-fitting method (Rietveld, Pawley, Le Bail)
- Analysis report

Databases

- COD (open-access collection)
- ICDD PDF-2 (optional)