

# XRD AL-2700B

X-ray Diffractometer Multi-functional



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**Analytical Technologies Limited**

An ISO 9001 Certified Company

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XRD AL-2700B series diffractometer is designed for material research and industrial product analysis, and it is a perfect product which combines the conventional analysis and special purpose measurement.

## ►► Features:

- The perfect combining with hardware and software system, satisfy with the requirement of different application field academicians, scientific research.
- High precision diffraction angle measuring system, obtaining more accurate measurement results.
- High stability X-ray generator control system, and get more stable repeatable measurement precision.
- Various functional accessories meet the requirement of different testing purposes.
- Program operation, integrated structure design, easy to operate, more beautiful appearance of the instrument.

» X-ray diffractometer is a kind of universal testing instrument for revealing crystal structure and chemical information of material:

- One and many phase identification of unknown sample
- Quantitative analysis of the phase in the mixed sample
- Crystal structure analysis ( Rietveld structure analysis)
- The crystal structure change (high temperature and low temperature condition) of the abnormal condition.
- Thin film sample analysis, including film, multilayer film thickness, surface roughness, charge density.
- Analysis of micro area sample.
- Texture and stress analysis of metallic materials

## ►► Specification:

	XRD AL-2700B
Rated power:	4kW
Tube voltage:	10~60kV
Tube current:	5~80mA
X-ray tube:	Metal ceramic tube Target material: Cu, Fe, Co, Cr, Mo, etc Power:2.4kW
Focus size:	Closed proportional counters or High speed one-dimensional semiconductor counter
Stability:	≤0.01%
Goniometer structure:	Sample level( $\theta \sim \theta$ )
Radius of diffraction:	225mm(or custom by request:150~285mmrange)
2 $\theta$ Scanning range:	-6~160°( $\theta$ s:-3~80°, $\theta$ d:-3~80°)
Scanning speed:	0.0012°~50°/min
Angle locating speed:	1500°/min
Scanning fashion:	$\theta$ s/ $\theta$ d linkage /single acting; continuous, stepping and Omg
Data processing:	1/10000°
Angle repeatable accuracy:	1/10000°

2θ Angular linearity:	International standard sample(Si, Al <sub>2</sub> O <sub>3</sub> ), the angle of all peak in full spectrum are not more than $\pm 0.02^\circ$
Detector:	Proportional counters(PC)or scintillation counter(SC), Silicon drift detector(SDD), High speed one-dimensional semiconductor array detector
Maximal counting rate of linearity:	$5 \times 10^5$ CPS(PC,SC with the compensate function of miss counting), $15 \times 10^4$ CPS (SDD), $9 \times 10^7$ CPS(one-dimensional array)
Energy resolution ratio:	$\leq 25\%$ (PC,one-dimensional array), $\leq 50\%$ (SC), $\leq 200$ eV(SDD)
Counting fashion:	differential coefficient or integral, PHA automatically, dead time regulate
Stability of system measure:	$\leq 0.01\%$
Scattered rays dose:	$\leq 1 \mu\text{Sv/h}$ (without X-ray protective device)
Instrument integrative stability:	$\leq 0.5\%$
Figure size:	1000×800×1600mm

## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



**Analytical**  
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1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



 **Analytical**®  
Technologies Limited

HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

W. [www.analyticalgroup.net](http://www.analyticalgroup.net)  
[www.hplctechnologies.com](http://www.hplctechnologies.com)  
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