

X-RAY DIFFRACTOMETER (XRD)

MANUFACTURER : Bruker

MODEL : D8 Advance

Samples

- Types : powder, thin film, ceramics ...
- Sample size: maximum 38 mm (1.5 in.) disk
- Thickness : 5 mm

Applications

- Semi-quantitative or quantitative analysis
- Bragg-Brentano incident method for powders and grazing angle method for thin films
- Identification of crystallographic phases
- Determination of crystallite sizes

Characteristics

- X-ray source : $\text{CuK}\alpha$, $\lambda = 1.542 \text{ \AA}$
- Parallel beam (Göbel mirror) and divergent beam ("powder" method)
- Configuration $\theta/2\theta$ (fix source)
- Detector : scintillator
- Four Anton Paar XRK900 for in-situ measurements across temperature (20 °C to 900 °C), pressure (1 mbar à 10 bars) and controlled atmosphere
- Detector 2 Dimensions (GADDS)