

X-ray diffractometer STOE STADI P, # 6.11.KL 61249, 2006 year production.

TECHNIQUE

RADIATION TYPE, SOURCE X-rays, Cu λ **VALUE USED** 1.540598 Å, $K\alpha_1$
 λ DISCRIM.(Filters Mono, Etc.) Primary beam, curved Ge Mono.
 λ DETECTOR (Film, Scint, Position Sensitive, etc.) mini PSD (linear)
INSTRUMENT DESCRIPTION (Type, Slit, etc.) 130 mm horizontal diffractometer STOE STADI P, Transmission mode (equivalent to Guinier geometry); distance from X-ray tube focus to monochromator 260mm, distance from sample to detector 220 mm; monochromator blade, horizontal slit system, vertical slit 6 mm, short collimator for transmission mode, vertical reducer slit 4 mm on PSD, a two sets of Soller Slits on primary beam and on PSD entrance window. **DIV= 0.3 REC=**
INSTRUMENTAL PROFILE BREADTH 0.095 $^{\circ}2\theta$ 56.122 (Si) **TEMPERATURE ($^{\circ}K$)** 296 \pm 0.5
SPECIMEN FORM/PARTICLE SIZE Powder, spread evenly on the transmission foil with diluted glue or vacuum grease / < 30 μm
RANGE OF 2θ FROM 2.200 **$^{\circ}2\theta$ TO** 135.000 **$^{\circ}2\theta$ SPECIMEN MOTION** Sample spinner
INTERNAL/EXTERNAL 2θ std (if any) Si SRM640b **LATTICE PARAMETER OF 2θ STD** 5.43094 Å
 2θ ERROR CORRECTION PROCEDURE sample shift refinement
INTENSITY MEAS. TECHNIQUE Step scan data **PEAK X INTEGRATED X**
MINIMUM INTENSITY THRESHOLD (IN RELATIVE INTENSITY UNITS)
INTENSITY STD USED α -Al₂O₃ SRM676 **$^{\circ}2\theta$'s OF INTENSITY** 43.350 <1 1 3 >
INTENSITY RATIO I/I_c **CONVERSION FACTOR IF CORUNDUM NOT USED**
RESOLUTION (FWHM) FOR THIS MATERIAL: $^{\circ}2\theta$ AT $^{\circ}2\theta$
 2θ REPRODUCIBILITY FOR THIS MATERIAL: $^{\circ}2\theta$ AT $^{\circ}2\theta$

