

The HTK 2000N from Anton Paar is a strip-heater type chamber for powder X-ray diffraction with direct sample heating from room temperature to up to 2300 °C, depending on the strip material and sample environment.

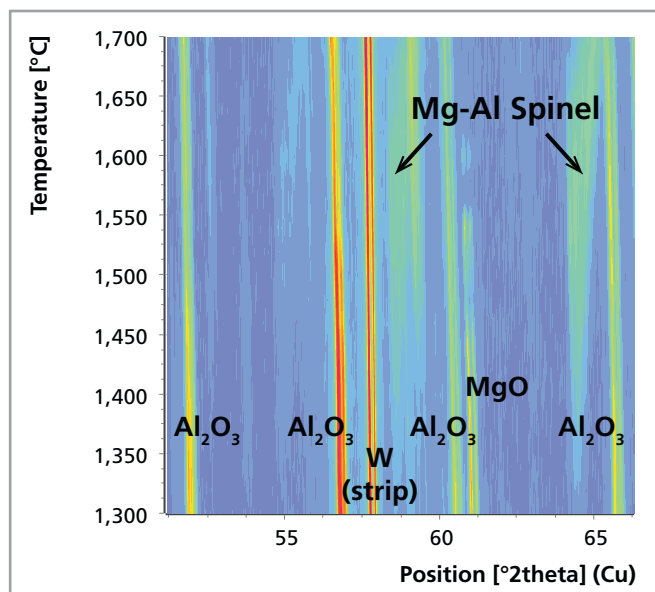
Non-ambient attachment for XRD

HTK 2000N – high-temperature chamber

Application example

Benefits

- *In situ* powder X-ray diffraction studies for temperatures up to 2300 °C
- Allows for extremely fast heating rates
- Chamber design optimized for a minimum temperature gradient along the heating strip and maximum position stability of the sample
- Integrated alignment slits allow exact positioning of the strip surface even at high temperatures
- A choice of heating strips depending on experimental requirements
- Easy access to the heating strip for straightforward sample preparation

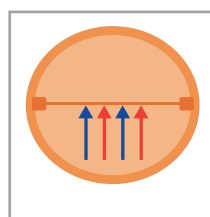


Formation of Mg-Al Spinel from mixture of Corundum and Periclase

HTK 2000N chamber



Features



Direct heating

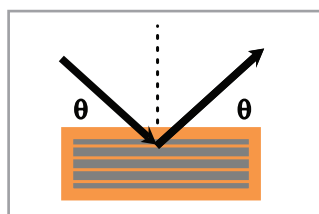
25-2300 °C (tungsten strip)
 25-1600 °C (platinum strip)
 25-1500 °C (tantalum strip)
 Max. heating rate: 900 °C/min
 Recommended heating rate: 600 °C/min

Air

Vacuum
 10^{-4} mbar

Inert
 gases

Atmospheres



Flat plate reflection geometry.

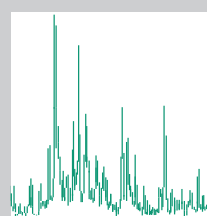
Platinum
 air,
 vacuum,
 inert gas

Tungsten
 vacuum

Tantalum
 vacuum

Heating strips

Applications



Powder XRD

Conclusion

The HTK 2000N high-temperature chamber is an ideal choice for *in situ* studies of phase transformations and changes of structural properties when extremely high temperatures are required.