

The HTK 16N from Anton Paar is a strip-heater type chamber for powder X-ray diffraction with direct sample heating from room temperature to 1600 °C in air, inert gases and vacuum.

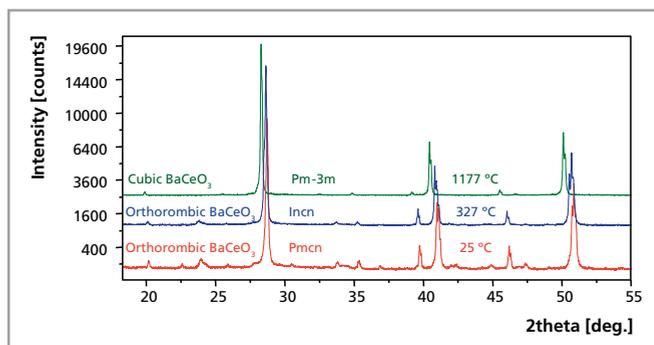
Non-ambient attachment for XRD

HTK 16N – high-temperature chamber

Application example

Benefits

- *In situ* powder X-ray diffraction studies up to 1600 °C
- Enables 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
- Additional thermocouple to be placed in direct contact with the sample for reliable temperature measurements and control
- A choice of heating strips depending on the experimental requirements
- Easy access to the heating strip for straightforward sample preparation



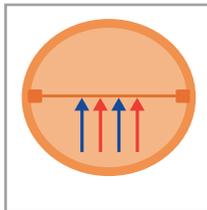
Structural phases of BaCeO₃ as followed by in situ X-ray diffraction from room temperature to 1177 °C

The sample is a courtesy of the Department of Earth Science at University College London.

HTK 16N chamber

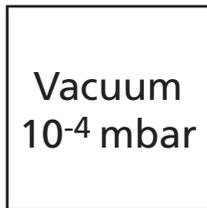


Features

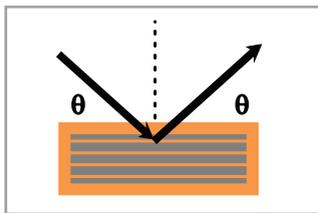


Direct heater

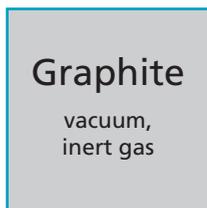
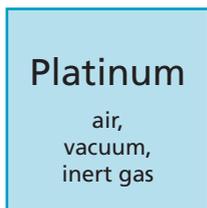
From room temperature to 1600°C (Pt strip)
 From room temperature to 1500°C (Ta and C strips)
 Heating rate:
 - 300 °C/min (C strip)
 - 500 °C/min (Pt and Ta strip)



Atmospheres

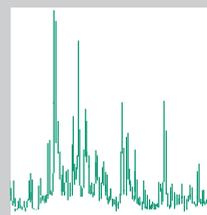


Flat plate reflection geometry.



Heating strips

Applications



Powder XRD

Conclusion

The HTK 16N high-temperature chamber is an ideal choice for *in situ* studies of phase transformations, changes of structural properties of both organic and inorganic materials when temperatures up to 1600 °C are required.

Although diligent care has been used to ensure that the information herein is accurate, nothing contained herein can be construed to imply any representation or warranty as to the accuracy, currency or completeness of this information. The content hereof is subject to change without further notice. Please contact us for the latest version of this document or further information. © PANalytical B.V. 2009. 9498 702 25511 PN10065