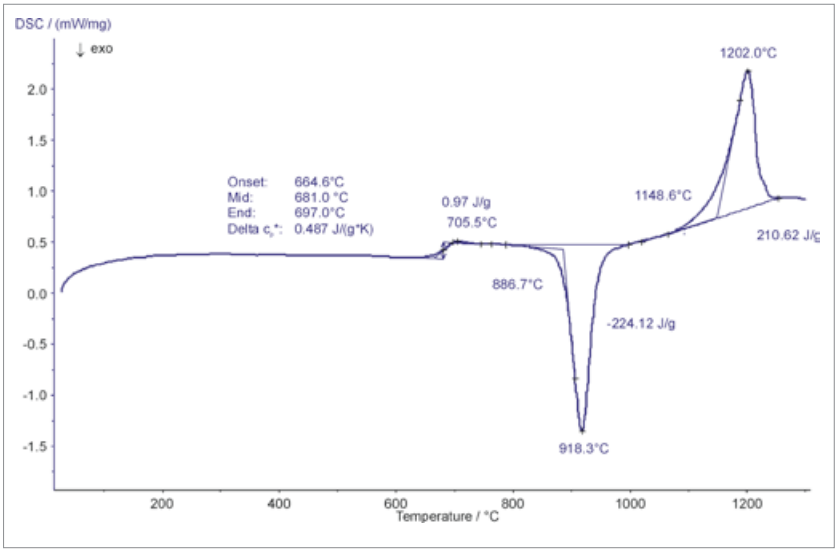
APPLICATION**SHEET**

INORGANICS – RESEARCH

VOLCANIC GLASS – OBSIDIAN

Obsidian is a dark colored massive volcanic glass, often associated with rhyolitic lavas. It breaks like glass, that is, with a concoidal fracture and so was the material most often used for arrowheads and other tools by the western North American Indians. The measured sample origins from British Columbia, Canada.



Instrument

DSC 404 C *Pegasus*®

Test Conditions

Temperature range	RT … 1300°C
Heating/cooling rates	20 K/min
Atmosphere	Air, static
Sample mass	58 mg
Crucible	Pt-R
Sensor	DSC type S

Results

The obsidian sample shows a glass transition at 681°C (midpoint) with a delta cp value of 0.487 J/(g*K). A small relaxation peak was detected at 706°C with a relaxation enthalpy of 0.97 J/g. At 918°C (extrapolated onset), crystallization starts. Melting was detected at about 1149°C. The melting enthalpy was determined to 211 J/g.

NGB · AS · 080-2006 · EN · 07/13 · Technical specifications are subject to change.

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