




SOUTH DAKOTA MINES

An engineering, science and technology university

Department of Geology and Geological Engineering GGE Research Highlights...

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 **SDSMT Geology & Geological Engineering**
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This month in research...

Graduate student Kristen Lewis worked on the homogenization of plagioclase hosted melt inclusions.

Melt inclusions are pockets of melt trapped in crystals as they grow. These inclusions can be used as a source of information about the composition of the magma that the crystals formed from.

However, before analysis they need to be homogenized (remelted and quenched into a homogenous glass) in order to remove post entrapment modification (little crystals form within the melt pocket and need to be reincorporated).

She does this, by putting crystals with melt inclusions into platinum boats and suspending them from a thermocouple which then drops into a furnace heated to 1230°C. When heating is finished, they are quenched by dropping into a cap filled with water thus creating a homogenous glass.

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