

## Reverse zoning pyroxenes and glassy inclusions of Martian meteorite Zagami

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About 50 years ago, Zagami meteorite came from space, and fell on Earth. The Zagami meteorite is the shergottite, a basalt rich in pigeonite, augite, and maskelynite glass (shocked plagioclase). It is one of the SNC meteorites, which are inferred to have come from Mars.

The Zagami consists of series of increasingly evolved magmatic lithologies. The bulk of the rock is a basaltic lithology dominated by pigeonite (Fs28.7-54.3), augite (Fs19.5-35.0) and maskelynite (Ab42-53). Approximately 20 vol % of Zagami is basaltic lithology containing FeO-enriched pyroxene and late-stage melt pockets.

The melt pocket is highly enriched in olivine-bearing intergrowths, mesostases, phosphates, Fe, Ti-oxides and sulfides.

Although today, many characteristics of Zagami are revealed, there are still some unsolved problems about this study, we identified the sample by Scanning Electron Microscopy. Pigeonite, augite, maskelynite, phosphate, Fe-Ti oxide, sulfide, mesostases are found and analyzed. The analysis result was substantially good fit with precedence research. But in this study, two of interesting points come out.

One is that pyroxene show reverse zoning. Another one is that pyroxene have glassy inclusion. Further research about these points will be needed.

Keywords: Martian meteorite, Zagami, reverse zoning, glassy inclusion