

Lithium Mineralization of the Idermeg zone in Central Mongolia: Petrography and Mineralogical study

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Introduction

The most important means of storing energy is the lithium battery and the capacitor, therefore the significance is high for conducting studies on the most important raw material of lithium battery and assessing its future prospect.

In Mongolia, lithium mineralization is usually found in the pegmatite, and the Idermeg zone is an area of great interest.

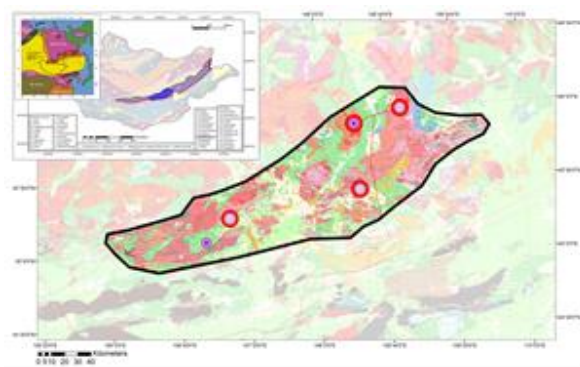


Figure 1. Location map of lithium deposits and occurrences in the Idermeg zone [*Deposit: Munkhut (MTD), Occurrences: Khukhdel (KDO), Bayan Teeg (BTO) and New (NWO)*]

Methods

Sample preparation, microscopic observation, chemical analysis (ICP, XRF), X-ray diffractometer (XRD) analysis, scanning electron microscope (SEM-EDX) analysis, and measurement Fluid Inclusion Thermobarometer analysis were accomplished within the framework of non-degree research program in the ICREMER, Akita University..

Results and Discussion

As a result of the study, petrographic and mineralogical characteristics of lithium deposit and occurrences was very

similar. Lithium mineralization is related lithium bearing pegmatites named LCT (Lithium – Cesium) – Tantalum type pegmatite. Mineralization type classified two assemblages are lepidolite and quartz lepidolite.

Accessory minerals were revealed cassiterite, tantaniobite, apatite and zircon.

Lithium mineralization of the Idermeg zone developed by one system following from South West to North East directed regional structure.

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