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Mountain
Chulhwa
Buncheong
Ware 2

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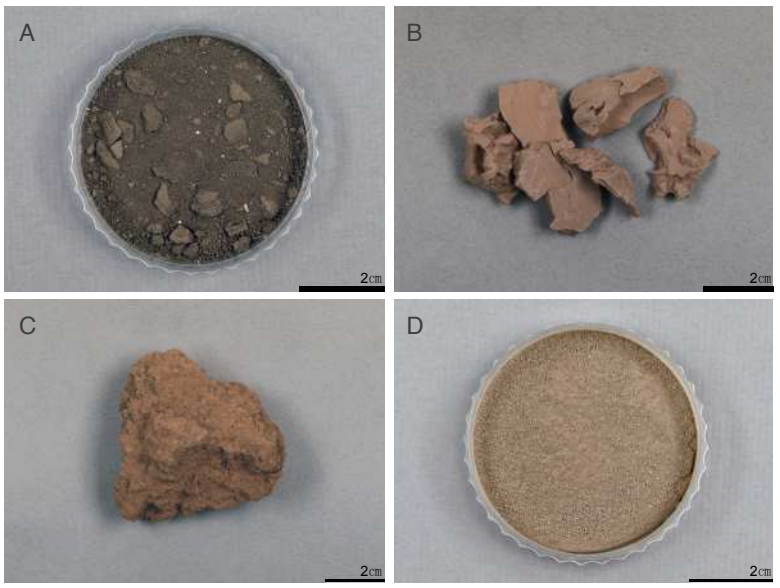

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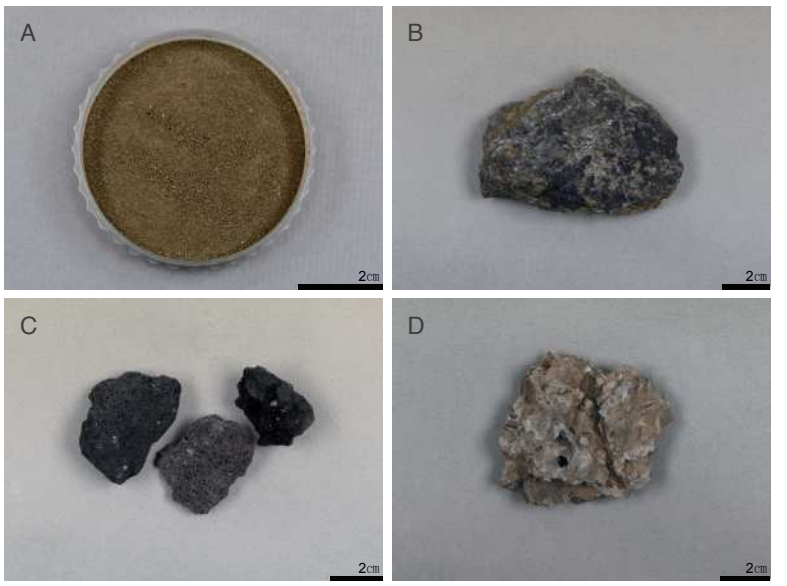

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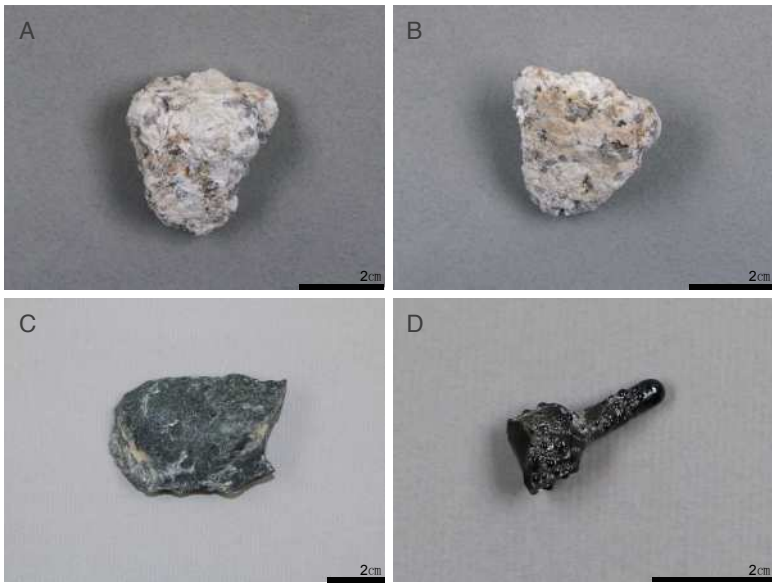

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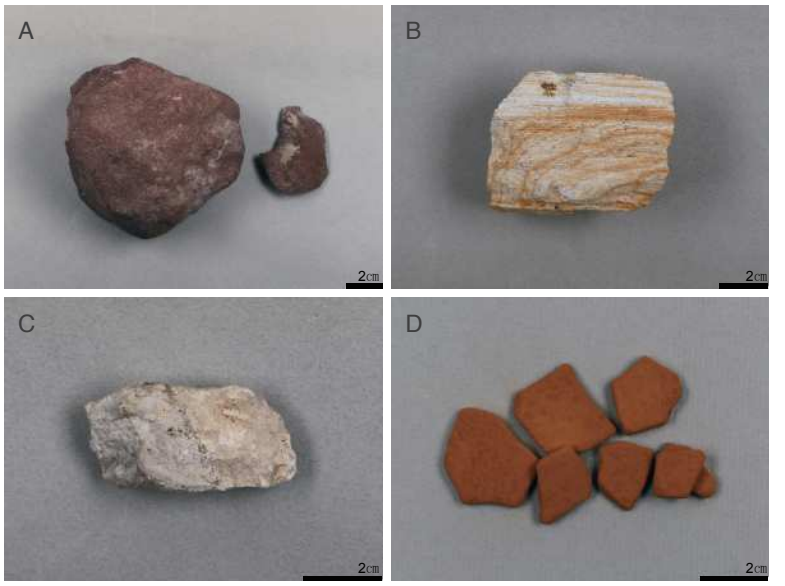


Picture 11. Excavation Condition of Chulhwa Material Test Sample 8
(A) Imari Seokganju (B) Imari Celadon Clay
(C) Izumi Yama (D) Garatsu Seokganju

Photo 37. Yongdam-ri Clay

Comparative Analysis Iron Containing Mineral (Seokganju) of Each Region
Chulhwa Material (Seokganju)
Design Procedure : Refined Materials above Bisque Fired Shard (Moltal technique)
Chulhwa Material : Seokganju of Each Region (Based on Historical Research and Document)
Bisque Fired Ware : Mixed Onggi Clay with Red Clay (50 : 50)
Size : 195x195x167mm
Firing Temperature : 850°C

Gwangan-ri Basalt

Geumam-ri, Jincheon

Gwangju Clay

Gongju Clay

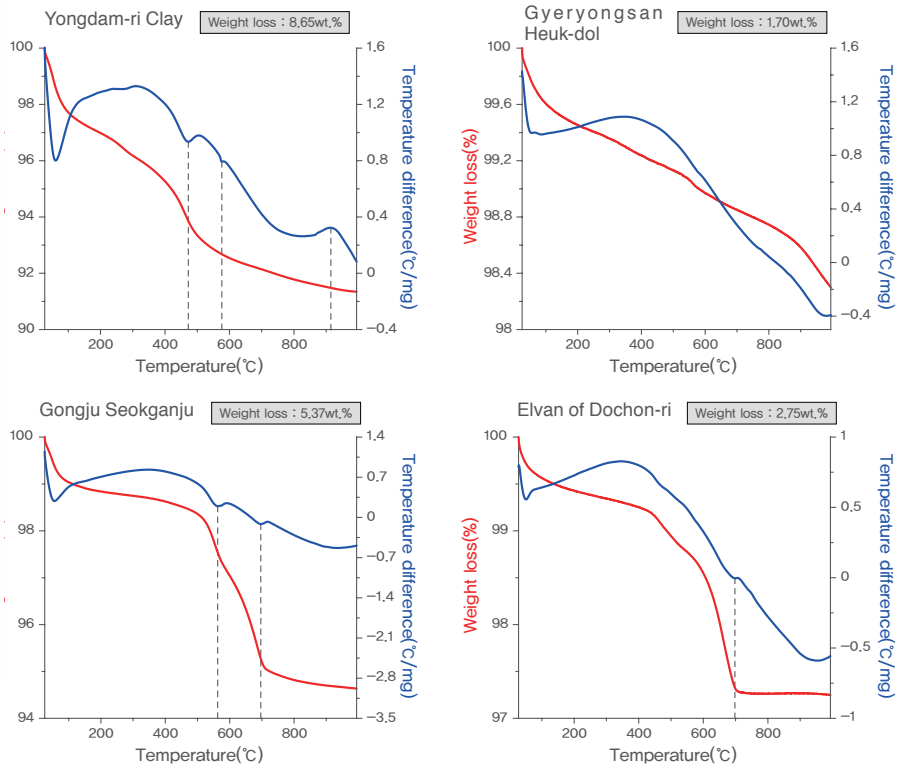
Thermal Analysis(DTA-TG)

In this research, a Differential Thermal Analysis(DTA) and Thermogravimetry(TG) were conducted to analyze the mineral transmissions according to thermal changes. Each test sample was ground to under 2㎛ and underwent a thermal analysis from room temperature to 1,000°C at a heating rate of 10°C/min. Each material showed its own distinctive DTA-TG curve and weight reduction rate. In the case of Yongdam-ri clay, the largest weight reduction happened between room temperature to 150°C and it was estimated to be due to the dehydration of absorption water, according to the differential thermal analysis result. The temperature range where the second largest weight reduction happened was beween 350°C～550°C and was estimated to be due to the continuous dehydration of absorption water. Generally, most of the clay showed endothermic peaks in the low temperature range of 100℃～200°C and, once again, the second endothermic peaks happened between the high temperature of 500℃～600°C..As the clay mineral became recrystallized, it showed its exothermal peak at around 900°C.

Also in the case of the Yongdam-ri clay test sample, the exothermal peak was confirmed to be around 900°C due to the recrystallization of clay minerals. Also, due to the α→β transition of quartz, differential thermal analytical curves showed sharp endothermic peaks around 573°C(Picture No.42).

Photo 39.
Gyeryongsan Basalt

The Second Firing Result of Iron Containing Mineral (Seokganju)
Firing Condition : Reductive Firing
Size : 175X175X165
Firing Temperature : 1230°C



Picture 42. Thermal Analysis Result of Yongdam-ri Clay, Gyeryongsan Heuk-dol(Basalt), Gongju Seokganju and Elvan of Dochon-ri.

The Second Firing Test Result of Iron Containing Mineral (Seokganju) of Each Region

Jeok-to of Gongju

Ulleung-do Seokganju

Volcanic Rock of Ulleung-do

Hwang-to of Gilmyeong-ri

Elvan of Dochon-ri

Heuk-to of Dochon-ri

Geoncheon-ri Seokganju

Beoseot-to of Geoncheon-ri

Huin-dol of Geoncheon-ri

Gyeryong Mountain Chulhwa Buncheong Ware

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