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The Relation among Synthetic Fluid Inclusions Homogenization Temperature of Halite, Air Temperature and Water Temperature under Natural Conditions

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A large number of fluid inclusions are formed in the crystal formation of halite, in which pure liquid phase ones supply a new method of paleo temperature inversion by means of cryogenic thermometry. In this study, we measured homogenization temperature of fluid inclusions and record the air temperature during the crystal formation. According to the compare results, we drew a conclusion that the homogenization temperature of fluid inclusions can only reflect the change of the maximum temperature, but not all temperature during the crystal formation.

Key words: halite fluid inclusions; homogenization temperature; air temperature; maximum temperature



Fig. 1. Photo of synthetic fluid inclusions, laboratory-grown salt.

Table 1 Statistics of homogenization temperatures of fluid inclusions in halite and air temperatures

temperature range air temperatures		homogenization temperatures of fluid inclusions in halite
10.5-15.5	0	7
15.5-20.5	5	24
20.5-25.5	11	44
25.5-30.5	23	82
30.5-35.5	21	113
35.5-40.5	5	10

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