

Understanding Mordenite in New Zealand

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ABSTRACT

Mordenite is the sixth most common zeolite mineral globally, forming at low temperatures (<40 °C) in hydrothermal systems. This zeolite has a morphology that fibrous, however is not known to be carcinogenic, unlike the fibrous zeolite erionite. Therefore, distinguishing mordenite from erionite has important implications for determining potential health risks. In New Zealand extensive deposits of mordenite occur in association with preserved geothermal systems, particularly in the Coromandel and Taupo Volcanic Zones. Herein mordenite from New Zealand is characterised in terms of mineral deposition, Morphology, mineral and elemental association in order to distinguish mordenite from carcinogenic erionite.