

Rare Minerals from Kawazu Mine, Shizuoka Prefecture

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In this study, we report a several kinds of rare minerals which recently discovered from Osawa mineral deposit of Kawazu mine, Shizuoka prefecture. Sonoraite: a thin lemon yellow platelet up to 0.1mm diameter in the fracture of quartz vein with poughite and jarosite. Empirical chemical formula is corresponding to $\text{Fe}_{0.99}(\text{TeO}_3)\text{1.01}(\text{OH})/2.00\text{H}_2\text{O}$. Poughite: translucent, brownish yellow, short prismatic euhedral crystal or spherical aggregate up to 2mm diameter. Empirical formula is $\text{Fe}_{1.91}(\text{TeO}_3)2.08(\text{SO}_4)0.97/3.03\text{H}_2\text{O}$. Waylandite: vitreous rhombohedral crystal in a cavity of quartz enriched with wittichenite. Empirical formula is $(\text{Bi}_{0.90}, \text{Ca}_{0.12})\text{1.02}(\text{Al}_{2.88}, \text{Fe}_{0.04})\text{2.92}(\text{PO}_4)1.97(\text{SO}_4)0.03(\text{OH})4.83$. We report another phosphate minerals, corkite, cacoxenite, turquoise and so on.

Kawazu mine, which is situated at southern part of Izu Peninsula, is a famous gold-silver mine.

The ore deposits develop in Tertiary andesite. Over twenty quartz vein containing Au, Ag are known in the mineralized zone, and many rare minerals, new minerals and new one for Japan, have been reported and now a hundred kinds of minerals are listed. Osawa deposits, in the western part of mineralized area of this mine, are characterized as epithermal quartz vein containing native tellurium and Te

-bearing minerals. We have been studied about minerals from this mine since 1995 and we recently discovered a several kinds of rare minerals. In this study, we report their mode of occurrence, morphology, chemical and crystallographic property.

Sonoraite: this is occurs in the cavity or fracture of quartz vein associating with poughite, jarosite and quartz crystals. The sonoraite crystal is thin platelet up to 0.1mm diameter and lemon yellow-colored with pearly luster. The strongest diffraction lines are 10.48, 3.29, 4.65, 2.53, 3.65, 3.10(A). Chemical data from EPMA give the empirical formula corresponding to $\text{Fe}_{0.99}(\text{TeO}_3)\text{1.01}(\text{OH})/2.00\text{H}_2\text{O}$. Sonoraite is first for Japan. Poughite: It is translucent, brownish yellow, short prismatic euhedral crystal or spherical aggregate up to 2mm diameter. The mode of occurrence is the same as that of sonoraite. Associated minerals are sonoraite, jarosite, tellurite, native tellurium. The strongest x-ray lines are 7.14, 3.35, 5.76, 3.56, 3.24(A). Empirical formula is corresponding to $\text{Fe}_{1.91}(\text{TeO}_3)2.08(\text{SO}_4)0.97/3.03\text{H}_2\text{O}$. Kawazu mine is the second locality of poughite in Japan. Waylandite: These are vitreous rhombohedral crystals up to 2mm, or botryoidal aggregate up to 0.2mm in a cavity of quartz enriched with wittichenite. Variscite, wavelite, svanbergite-crandallite, and clay minerals were associating in the cavity. The strongest diffraction lines are 2.94, 5.67, 4.85, 3.49, 1.89. Empirical formula is $(\text{Bi}_{0.90}, \text{Ca}_{0.12})\text{1.02}(\text{Al}_{2.88}, \text{Fe}_{0.04})\text{2.92}(\text{PO}_4)1.97(\text{SO}_4)0.03(\text{OH})4.83$. Waylandite is the first discovery for Japan. We report another phosphate minerals, corkite, cacoxenite, turquoise and so on.