Mineral Showcase

Rhodochrosite

$MnCO_3$

Rhodochrosite is usually a gangue mineral found in the oxidation zone of medium-temperature hydrothermal lead/zinc, silver, and copper deposits. Its name comes from two Greek words meaning *rose* and *color*, in allusion to the mineral's typical rose-red color. It is the bi-valent manganese atoms that are responsible for the color. However, purity is rare in nature. Most specimens contain other cations that replace manganese in the crystalline structure, predominately calcium, but magnesium and zinc can also substitute for manganese to a more limited extent, and iron to a greater extent, which affects the shades of color, ranging from light pink to brown and even black in the case of manganosiderite. In fact, manganese carbonate forms a complete solid-solution series with iron carbonate, with the end members being rhodochrosite and siderite.

While massive specimens of rhodochrosite can be confused visually with the silicate counterpart, rhodonite, the carbonate can easily be distinguished by its effervescence in acids, and its softness. Crystals are easier to identify, as they portray typical rhombohedral cleavage and hexagonal structure. Environment is the best indicator. Any pink specimen found in a hydrothermal setting is most likely to be rhodochrosite.

First described in 1813 from a sample obtained in the silver mines of Romania, rhodochrosite was most often relegated to the dumps due to its interference in the concentration of silver ores. It wasn't until the attractive mineral found popularity with collectors and lapidarists that rhodochrosite earned its place among other highly sought after minerals. Once mined when in large enough quantity as an ore of manganese (such as at Butte, Montana), the mineral finds its greatest value in the decorative stone and jewelry trades.

The largest and most attractive specimens were excavated from the silver mines in Colorado, particularly the Sweet Home property near Alma, which was discovered in 1873. The Sweet Home Mine was the source of the famous "Alma King" and "Alma Rose" specimens on display at the Denver Museum of Nature and Science—the largest crystals of rhodochrosite ever found!

VII 93 D

Aggregate of crystals with Pyrite on Feldspar matrix.

Specimen 1.25 x 1 inches

Hezhou Mine

Guangxi Province, China

VII 90 D

Aggregate of crystals with Pyrite.

Specimen 1.5 x 1.25 inches

Animon Mine

Huaron, Peru

VII 113 C

Drusy crystal coverage with Calcite on iron gossan matrix.

Specimen 3.25 x 2.5 inches

Potosi Mine

Santa Eulalia Mexico

All specimens from the G. Miles Lehman Collection

VII 75 D

Crusty aggregate on granitic matrix.

Specimen 3.25 x 2.75 inches

Green Monster Mine
Goodsprings District
Goodsprings, NV

VII 44 C

A massive variety of Rhodochrosite called Manganosiderite.

Specimen 4.5 x 6.5 inches

Pan American Mine
Comet District
Pioche, NV

Tests: Dissolves very slowly in cold, rapidly in warm, hydrochloric acid with effervesence (test for CO_2). Powder fused in borax colors bead violet in oxidizing flame (test for Mn).

MnO = 61.7 percent CO_2 = 38.3 percent

All specimens from the G. Miles Lehman Collection

Classic Relationship Specimen

VII 60 C

Granular crystal aggregate with Calcite.

Specimen 5.25 x 3.25 inches

Mohave County, AZ

Many authors consider rhodochrosite to be relatively common as a gangue mineral found in the oxidation zone of medium-temperature hydrothermal lead/zinc, silver, and copper deposits. However, as I always say, go out and find some! That's the best way to determine for yourself how common something is. In fact, rhodochrosite is comparatively rare, and good specimens, particularly crystals, are not at all easy to find. The above sample from Arizona displays its typical massive habit and association with calcite from the oxidation zone of a hydrothermal vein in a carbonate host environment.

from the G. Miles Lehman Collection