

Micro-minerals are a Bargain?

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What follows is a “just for fun” computation on the cost/value of micro-mineral specimens.

- Ray paid \$20 for the Bald Mtn. monazite-Ce at the March 2023 Cares collection voice auction.
- The monazite crystal is about 2.5 mm x 1.5 mm x 0.5 mm. Since the edges are quite tapered, I estimate the volume of the crystal to be about 1 cubic mm, (1 mm³)
- The density of monazite is 5 gm/cm³ ... about 5 times that of water, 1 gm per cm³
- Converting the monazite density to gm/mm³, (a factor of 1000, mm³ per cm³), we get the density of monazite to be .005 gm/mm³.
- Since Ray's monazite crystal volume is estimated to be about 1 mm³, the estimated weight of Ray's monazite crystal is .005 grams.
- There are 28.35 grams per ounce.
- It requires 28.35/.005 = 5670 of Ray's monazite crystals to add up to one ounce.
- So one ounce of comparable monazite crystals at \$20 each would cost \$20 * 5670 = \$113,400.
- Gold presently (3/2003) sells for about \$2000 per ounce.
- Monazite crystals are 113,400/2000 = 56.7 times more valuable than gold !

There are, of course a few flaws in this exercise.

The availability of an ounce-equivalent of such monazite specimens (5,000+) would quickly saturate the market and depress the price. I suspect there are fewer than 500 collectors world-wide who would desire such a specimen. With a large supply and limited demand, the price might drop to three for a dollar !

There are mitigating factors that impute the value, including the Cares collection and Bob Janules collected, provenance. Also the exact locality site is very remote, known to only to a few. And finally \$20 would likely just cover the cost of gas one-way for most New England collectors.



Monazite-Ce on matrix, Bald Mountain, Ossipee, NH. 5.2 mm field of view