

## Monazite group - $\text{CePO}_4$

Hardness: 5 - 5.5. Cleavage: Distinct/good. May be radioactive. Insoluble in water. Very slightly attacked by warm concentrated HCl but some solubility in most acids. Tolerates Iron OUT/EDTA. Stable to hot oxalic acid and 15% HCl. Remove enclosing calcite with dilute HCl or organic acids but minimize exposure. Brown surface coatings often cannot be removed without destruction of the underlying crystals. Insoluble in ethanol.

A group of similar minerals expected to have similar physical and chemical properties. Data given here is for monazite-(Ce). Turnerite is a synonym for monazite-(Ce).

### References

Mindat: <https://www.mindat.org/min-2750.html>

Handbook of Mineralogy: <https://www.handbookofmineralogy.org/pdfs/monazite-Ce.pdf>

Hardinger, S. (2025) Mineral Specimen Cleaning and Development for the Amateur, 339 p.

Rohner, T. (2000) Properly clean minerals online cleaning book.

[www.strahlen.org/stepbystep/mineralien-reinigung2.pdf](http://www.strahlen.org/stepbystep/mineralien-reinigung2.pdf). In German.

Sinkankas, J. (1972) Gemstone & Mineral Data Book, 346 p. Winchester Press, New York.

Weast, R., Ed. (1982) CRC Handbook of Chemistry and Physics, 2380 p., CRC Press, Inc., Cleveland.