

REE in wolframites from Sherlova Gora gems mine (Transbaikalia, Russia)

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For the first time, the content and distribution of REE in tungsten greisenes and beryl-topaz-quartz veins of the Sherlovaya Gora gem deposit are studied. Wolframite is represented by ferberite with the contents of the extreme terms of the series (by weight%) FeO 23.76 - MnO 1.2 and FeO 17.59 - MnO 6.55. A feature of the distribution of REE in tungsten is the low average content (ppm) of light lanthanides (La 0.8, Ce 1.96, Pr 0.24, Nd 1.28, Sm 0.59, Eu 0.05) and high heavy (Ho 1.3, Er 6.48, Tm 1.67, Yb 18.96, Lu 3.29). Clearly showed the europium minimum. This indicates the crystallization of wolframite from residual melts. The average content of Y (12.76 ppm) in tungsten is greater than that of heavy lanthanides, but smaller than Yb. The spectrum of REE content with respect to chondrite is given in the figure. Dependences of REE contents from FeO / MnO in tungsten have not been revealed.

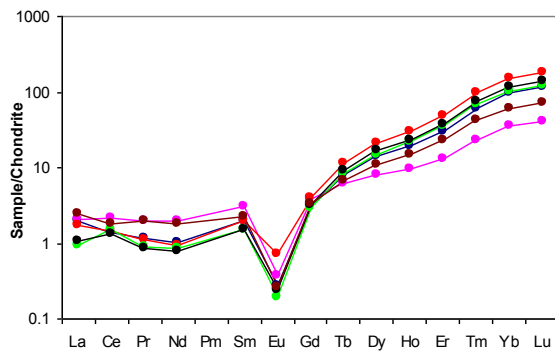


Figure 1. REE concentration in tungsten (normalized to chondrite).