**Table S1:** Sampling sites, sample codes, their GPS coordinates, and a brief description.

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| --- | --- | --- |
| locality, sample labels | GPS coordinates  (latitude in oN,  longitude in oE) | brief description |
| Magurka-Kapustisko, MH-2 | 48.94808, 19.41267 | boulders of Lower Triassic sandstones in a forest road |
| Magurka-Kapustisko, MH-3 | 48.94400, 19.41883 | pegmatite in porphyric granite of Prašivá type, outcrop on a side of an overgrown forest road |
| Jedľové Kostoľany-Brezov štál, JJD | 48.50185, 18.50898 | carbonate gangue with quartz, chlorite, and chalcopyrite, loose hand specimens at the foot of the largest waste dump |
| Bacúch-Biela Skala, B | 48.86907, 19.80038 | banded quartz-magnetite ores, waste dumps in a forest |
| Muráň, VV4 | 48.69657, 20.00358 | garnet mica schists |
| Čierny Balog-Jergov, C | 48.75503, 19.65282 | massive carbonate-quartz gangue in retrograde metamorphosed gneisses, waste dump drained by a small creek |
| Čučma-Kutačka U-REE prospect, CUC | 48.71678, 20.55558 | hydrothermal quartz vein with abundant fluorapatite and U-REE mineralization, sample collected from an outcrop of the vein uncovered in an exploration trench |