**Introduction:** Located in NW of Brazil, the Rondonia Tin Province is known by its tin deposits associated with several A-type granite suites. Associated with tin, other elements may occur as byproducts, in the primary and secondary ores, or accumulated in the tailings of the existing mining operations in the region. This study is a first glance in the tailings of Bom Futuro, a tin deposit in the centre-north portion of the state. The technique used is the Mineral Liberation Analyzer (MLA) and the analyzed material is a washed and sieved tailing, collected before the jigging process.

**Steps of sample preparation and MLA measurement:**
- drying and splitting;
- magnetic separation;
- three aliquotes;
- MLA analysis in TUBAF geometallurgy laboratory.

**Results**

- Monazite and xenotime are roughly separated, indicating preferential flow along with the cassiterite concentrate;
- Even with the available data no significant concentration of REE minerals has been found, the studied sample represents tailing material, thus some potential for a possible REE source is suggested;
- SEM-based MLA may form an important tool to profoundly assist in a higher recovery of cassiterite at the Garimpo Bom Futuro.

**Conclusion**

- Monazite and xenotime are roughly separated, indicating preferential flow along with the cassiterite concentrate;
- Even with the available data no significant concentration of REE minerals has been found, the studied sample represents tailing material, thus some potential for a possible REE source is suggested;
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**Bibliography**


