

## SUMMARY

Due to mining and processing of sulphide laterite and sulphide ore leads to environmental contamination by metals and metalloid elements. To determine how the contaminant leached and how can damage its nearby area, serves leaching experiments. In order to determine the potential impact on human health can be used in leaching tests simulated gastric, gastrointestinal and pulmonary solutions.

The aim of this bachelor thesis is to make these leaching tests to determine how a metallurgical waste affect the environment or the population in the region (eg. workers in the steel industry). The results show that the greatest exhibit leachability have ash. The limit values for hazardous waste in excess of Ni (4250 mg/kg) for inert waste Zn (22.3 mg/kg) and Cd (0.51 mg/kg). Gastric leaching tests show that the greatest health risk exists for Al TDI (181 µg/day), Ni (BE 324 µg/day) and V (TDI of 0.78 µg/day). Tolerable daily intake (Tolerable Daily Intake, TDI) is the estimated amount that a person can endure in the long term without harming the body. Background exposure (BE) is the dose or amount, to which the individual is exposed to. As a result of the extraction to the surroundings gets more contaminants than would be obtained by natural processes (erosion, leaching by water).