

	<b>Geochemistry</b> <b>Lakefield Laboratory</b>	Doc Type <b>Method Summary</b> Method Code <b>GC_CLA27D</b> Service <b>Testing</b> Issued Date <b>April 2022</b>
<b>Natural Resources</b>	<b>The Determination of Nitric acid Soluble Chloride in solids by Potentiometric Titration</b> [ Cl; Titration]	Approved by <b>V. Bautista</b>

**1. Parameter(s) measured, unit(s):**

Nitric acid soluble Chloride (Cl<sup>-</sup>), in %.

**2. Typical sample size:**

2g

**3. Type of sample applicable (media):**

Minerals, ores, metallurgical products

High levels of sulphide, thiosulphate, sulphite, bromide, iodide and cyanide will interfere with the formation of AgCl.

**4. Sample preparation technique used:**

The weighed amount of solid sample is leached with dilute nitric acid, filtered and the filtrate taken for analysis.

**5. Method of analysis used:**

The solution is titrated with silver nitrate using an auto-titration system and the total chloride present in the sample calculated.

**6. Data reduction by:**

The titration graph and volume of titrant is generated by the auto-titrator. Manual input of the raw data to computer, data fed to Laboratory Information Management System with secure audit trail.

**7. Figures of Merit:**

The Reporting Limit has been determined according to the following:

Element	Nitric acid soluble Chloride
RL(%)	0.1
Upper Limit (%)	100

**8. Quality control:**

Quality control materials include method blanks, replicates and reference materials and are randomly inserted with the frequency set according to method protocols at ~18% for process control analysis. Quality control materials will also include BRM (Barren reference materials, or preparations blanks) and preparation duplicates if samples have been taken through the sample reduction process.

**9. Accreditation:**

SGS Natural Resources conforms to the requirements of ISO/IEC 17025. Scopes of Accredited tests are site specific, please visit <https://www.scc.ca/en/search/laboratories>