



Method Summary

Determination of Chlorate, Iodide and Perchlorate in Waters and Leachates using Ion Chromatography

Scope and Range

This method is suitable for the determination of Chlorate, Iodide and Perchlorate in waters and leachates (mg/l).

The calibrated range for all the anions is between the LOD and 25mg/l.

Anion	Limit of Detection (mg/l)
Chlorate	0.1
Iodide	0.1
Perchlorate	0.25

Table 1 - Limits of Detection

References

none

Principle

The sample is injected onto a liquid chromatography column where the anions are separated and pass to a conductivity detector. The peaks of the calibration standards are assigned to each of the anions in the order in Table 1. Any peaks in the samples are then assigned to the anions that are present, this is based on the time recorded for the standards. Samples to be analysed for anions by IC should be taken using an un-preserved bottle. All samples should be stored refrigerated until ready for analysis.

Interferences

Very large ion concentrations of one peak may mask adjacent peaks in the chromatogram and prevent it from being detected. In this case, gradual dilutions are carried out to reduce the size of the interfering peak and still detect an analysable amount of the peak of interest. Any compound that co-elutes at the same time as any of the anions of interest and affects the conductivity recorded by the detector and may lead to false positives.