

Method Number: TM 228

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Issue Number: 10



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Method Summary**Determination of Major Cations in Water by iCap 6500 Duo ICP-OES****Scope and Range**

This method is applicable to the analysis of major cations in both pre-filtered neat and unfiltered acid digested water samples by ICP-OES.

Element	Calibration Range mg/l	LOD Dissolved Metals (mg/l)	LOD Unfiltered Method (mg/l)
Ca	0 - 400	0.012	0.057
Fe	0 - 25	0.019	0.024
K	0 - 400	1	2
Mg	0 - 400	0.036	0.05
Na	0 - 400	0.076	0.047
S	0 - 400	1	Not Validated

References

none

Principle

Preparation and Extraction:

Dissolved Metals

Neat (filtered) samples are received and acidified to matrix-match them to the standards.

Unfiltered Metals

30ml of sample is acidified with Aqua Regia before it is placed in a digiblock at 110°C for 25 minutes. A portion of the sample is then decanted prior to analysis.

Analysis:

Samples are analysed using a ThermoFisher iCap 6500 duo ICP-OES instrument with associated autosampler.

Interferences

None observed.