



**Transport**  
Roads & Maritime  
Services

# Test method T1014

Quantitative determination of sulfate ion  
in water

NOVEMBER 2012



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## Revision Summary

Ed/Rev Number	Clause Number	Description of Revision	Authorisation	Date
		Reformatted and Revision Summary Added.	D Dash	June 2001
Ed 2/ Ed 0	All	Alternative methods introduced. Revised format. Title Revised	D Hazell	Nov 2008
Ed 3/ Rev 0	All	Reformatted RMS template	J Friedrich	November 2012

Note that Roads and Maritime Services is hereafter referred to as 'RMS'.

The most recent revision to Test method T1014 (other than minor editorial changes) are indicated by a vertical line in the margin as shown here.

# Test method T1014

## Quantitative determination of sulfate ion in water

### 1. Scope

This test method sets out the procedure to determine the sulfate ion in water used for road construction.

### 2. General

- (a) One test method is to be selected from the alternatives listed in Table 1.
- (b) The selected test method must be used for all subsequent testing of sulfate ion in water within the Work unless otherwise specified.

*NOTE: The use of one test method is to enable consistent reporting of test results.*

### 3. Apparatus, Preparation, Procedure, Calculations and Reporting

- (a) Carry out the determination of sulfate ion in water in accordance with the section and test method selected from Table 1

**Table 1 – Alternative Test Methods to Determine the Sulfate Ion in Water**

Test Reference <sup>1</sup>	Relevant Section	Test Title	Reporting Unit
APHA 4500-SO <sub>4</sub> <sup>2-</sup>	C	Gravimetric Method with Ignition of Residue	mg/L
APHA 4500-SO <sub>4</sub> <sup>2-</sup>	D	Gravimetric Method with Drying of Residue	mg/L
APHA 4500-SO <sub>4</sub> <sup>2-</sup>	E	Turbidimetric Method	mg/L
APHA 4500-SO <sub>4</sub> <sup>2-</sup>	F	Automated Methylthymol Blue Method	mg/L
APHA 4500-SO <sub>4</sub> <sup>2-</sup>	G	Methylthymol Blue Flow Injection Analysis	mg/L
APHA 4110-SO <sub>4</sub> <sup>2-</sup>	B	Ion Chromatography with Chemical Suppression of Eluent Conductivity	mg/L
APHA 4110-SO <sub>4</sub> <sup>2-</sup>	C	Single Column Ion Chromatography with Direct Conductivity Detection	mg/L
APHA 4140 CIE	B	Capillary Ion Electrophoresis with Indirect UV Detection	mg/L

NATA accredited method		Analysis by Discrete Analyser technique for the determination of Sulfates in water	mg/L
NATA accredited method		Analysis by AES/ICP, classical techniques adapted from APHA 3120 B Inductively Coupled Plasma (ICP) Method.	mg/L
NATA accredited method		Analysis by AES/ICP, classical techniques adapted from Rayment and Higgins Agricultural Method.	mg/L

- (b) Include information required under the relevant test method and reference to this test method in the report

<sup>1</sup> APHA is the abbreviation for American Public Health Association (<http://www.apha.org/>)