



Fisher Scientific UK Ltd.
part of Thermo Fisher
Scientific
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Certificate of Analysis

Fisher Scientific's Quality System has
been found to conform to Quality
Management System Standard
ISO9001:2015 by SAI Global Certificate
Number QMS42099

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalogue
Number: S/3320/60

Quality Test /
Release Date: 03-JAN-13

Lot Number: 1228939

Expiry
Phrase: Use within 5 years of opening

Description: tri-Sodium citrate

Grade: AR

Application: For analysis

Appearance: Clear colourless Fine crystals (<2 mm)

Result Name	Test Value	Units	Specification
Assay	100.44	%	≥ 99.5 and ≤ 100.5
Calcium (Ca)	0.42	ppm	≤ 20
Copper (Cu)	<0.2	ppm	≤ 5
Iron (Fe)	0.4	ppm	≤ 5
Lead (Pb)	<0.05	ppm	≤ 5
Magnesium (Mg)	<0.2	ppm	≤ 5
Potassium (K)	3.01	ppm	≤ 100
Readily carbonisable substances	Pass		Must be 'Pass'
Total chloride (Cl)	<0.005	%	≤ 0.005
Total nitrogen (N)	<1	ppm	≤ 20
Total phosphorus (P)	<0.2	ppm	≤ 10
Total silicon (Si)	9.07	ppm	≤ 20
Total sulfur (S)	<2	ppm	≤ 20

Zinc (Zn)	<0.2	ppm	≤ 2
pH (5% aq. solution)	8.37		≥ 8 and ≤ 9

Additional
Information:

Meets the current analytical specification of BP and Ph. Eur.



A handwritten signature in black ink, appearing to read "Paula Faulkes".

Mrs Paula Faulkes
Quality Assurance Manager.

Thursday 15th of April 2021

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above. If there are any questions with this certificate, please call Customer Services on +44(0)1509 555500