

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek Global Certificate Number. CERT-0120633

Catalogue Number	S470
Lot Number	252303
Description	SODIUM CITRATE DIHYDRATE, USP/FCC/EP/BP/JP
CAS Number	6132-04-3
Quality Test/Release Date	16/Jul/2025
Suggested retest date	02/Mar/2028
Country of Origin	United States
Declaration of Origin	Organic-fermentation
BSE/TSE	This product is derived from plant material via a fermentation process. It does not contain or come into contact with any animal-containing materials or components.

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White crystalline powder or white granular crystals
British Pharmacopeia Grade - ACIDITY - ALKALINITY	PASS/FAIL	= PASS TEST	PASS TEST
British Pharmacopeia Grade - APPEARANCE OF SOLUTION	PASS/FAIL	= PASS TEST	PASS TEST
British Pharmacopeia Grade - ASSAY	%	Inclusive Between 99.0 - 101.0	100.20
British Pharmacopeia Grade - CARBONIZABLE SUBSTANCES	PASS/FAIL	= PASS TEST	PASS TEST
British Pharmacopeia Grade - CHLORIDES	ppm	<= 50	<50
British Pharmacopeia Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
British Pharmacopeia Grade - OXALATES	ppm	<= 300	<300
British Pharmacopeia Grade - RESIDUAL SOLVENTS	CONFORMS	= CONFORMS	CONFORMS
British Pharmacopeia Grade - SOLUBILITY	PASS/FAIL	= PASS TEST	PASS TEST
British Pharmacopeia Grade - SULFATES	ppm	<= 150	<150
British Pharmacopeia Grade - WATER	%	Inclusive Between 11.0 - 13.0	12.40
EP Grade - ACIDITY OR ALKALINTY	PASS/FAIL	= PASS TEST	PASS TEST
EP Grade - APPEARANCE OF SOLUTION	PASS/FAIL	= PASS TEST	PASS TEST
EP Grade - ASSAY	%	Inclusive Between 99.0 - 101.0	100.20
EP Grade - CARBONIZABLE SUBSTANCES	pass test	= PASS TEST	PASS TEST
EP Grade - CHLORIDES	ppm	<= 50	<50
EP Grade - EPSOLUBILITY	PASS/FAIL	= PASS TEST	PASS TEST
EP Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
EP Grade - OXALATES	ppm	<= 300	<300
EP Grade - RESIDUAL SOLVENTS	Meets Requirements	= MEETS REQUIREMENTS	MEETS REQUIREMENTS
EP Grade - SULFATES	ppm	<= 150	<150
EP Grade - WATER	%	Inclusive Between 11.0 - 13.0	12.40
FCC Grade - ALKALINITY	PASS/FAIL	= PASS TEST	PASS TEST
FCC Grade - ASSAY	%	Inclusive Between 99.0 - 100.5	100.20
FCC Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
FCC Grade - LEAD (Pb)	MG/KG	<= 2	<2
FCC Grade - WATER	%	Inclusive Between 10.0 - 13.0	12.40
Japanese Pharmacopeia Grade - ARSENIC	ppm	<= 2	<2
Japanese Pharmacopeia Grade - ASSAY	%	Inclusive Between 99.0 - 101.0	100.20
Japanese Pharmacopeia Grade - CARBONIZABLE SUBSTANCES	PASS/FAIL	= PASS TEST	PASS TEST

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.

Japanese Pharmacopeia Grade - CHLORIDE	%	<= 0.015	<0.015
Japanese Pharmacopeia Grade - CLARITY & COLOR OF SOLUTION	PASS/FAIL	= PASS TEST	PASS TEST
Japanese Pharmacopeia Grade - HEAVY METALS	ppm	<= 10	<10
Japanese Pharmacopeia Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
Japanese Pharmacopeia Grade - LOSS ON DRYING PER JP	%	Inclusive Between 10.0 - 13.0	12.40
Japanese Pharmacopeia Grade - OXALATE	PASS/FAIL	= PASS TEST	PASS TEST
Japanese Pharmacopeia Grade - PH		Inclusive Between 7.5 - 8.5	7.9
Japanese Pharmacopeia Grade - SULFATE	%	<= 0.048	<0.015
Japanese Pharmacopeia Grade - TARTRATE	pass test	= PASS TEST	PASS TEST
USP Grade - ALKALINITY	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - ASSAY	%	Inclusive Between 99.0 - 100.5	100.20
USP Grade - IDENTIFICATION (ALL LISTED)	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - RESIDUAL SOLVENTS	Meets Requirements	= MEETS REQUIREMENTS	MEETS REQUIREMENTS
USP Grade - TARTRATE	PASS/FAIL	= PASS TEST	PASS TEST
USP Grade - WATER	%	Inclusive Between 10.0 - 13.0	12.40



Harout Sahagian  
QC Manager

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research use or further manufacturing. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

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