



CERTIFICATE OF ANALYSIS

Product : **Citric Acid Monohydrate Fine Granular**

E 330

Lot number : **UJ414**

Manufacturing date : 04/2024

Date issued : 09/04/2024

Best use before : 04/2027

Date printed : 09/04/2024

The Quality Assurance Department certifies that this lot is conform our specifications.

The product meets all requirements of the following compendia, when tested accordingly: USP, FCC, Ph. Eur., JP, JECFA and Commission Regulation (EC) N° 231/2012.

Test	Method	Results	Units	CB specifications
<u>Tested methods</u> **				
Appearance	visual test	meets specification		colourless crystals or white, granular to fine powder
Odour	odour test *	meets specification		odourless
Water	Karl-Fisher titration	8.31 / 8.57	% H ₂ O	8.10 - 8.70
Identification	EP *	meets specification		meets requirements
Sieving on (50 g, 5 minutes)	sieve test N° 20 (850 µm)	0.6	%	max 5.0
Sieving through	sieve test N° 100 (150 µm)	1.0	%	max 5.0
Colour	UV/VIS (50% w/v; 405 nm 1 cm cell)	99.10	% T	98.00 - 100.00
Clarity of solution	Colour *	meets specification		meets requirements
Colour of solution	Colour *	meets specification		meets requirements
Heavy metals (sum: Cd, Cr, Cu, Pb, Hg, Zn, Ni)	ICP *	< 1	ppm	< 1
Aluminium	ICP *	< 0.2	ppm	< 0.2
Arsenic	ICP *	< 1	ppm	< 1
Barium	ICP *	< 1	ppm	< 1
Calcium	ICP *	< 10	ppm	< 10
Chlorides	nephelometry *	< 5	ppm	< 5
Copper	ICP *	< 1	ppm	< 1
Iron	ICP *	< 1	ppm	< 1
Lead	ICP *	< 0.5	ppm	< 0.5
Magnesium	ICP *	< 1	ppm	< 1
Mercury	ICP *	< 1	ppm	< 1
Oxalates / oxalic acid	HPLC *	< 10	ppm	< 10
Sulphates	ICP *	< 30	ppm	< 30
Zinc	ICP *	< 1	ppm	< 1
Readily carbonizable substances	EP	meets specification		meets requirements
Extraneous matter	CB test	meets specification		passes CB test
Assay	calculated by water content	100.00 / 100.26	%	99.80 - 100.50
Sulphated ash/residue on ignition	FCC	meets specification		meets requirements
<u>Not tested methods:</u>				Not applicable for CB, only for solvent extracted citric acid.
Tridodecylamine				

** Test methods are available on request.

* Results are confirmed by representative testing on finished products.

This lot was analysed and released by our authorized Quality Assurance Department and was found to meet the specifications as given above. This electronically issued and approved certificate is valid without signature.

This report has been generated by C. Vanrijkel

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