

CERTIFICATE OF ANALYSIS

Product	: Citric Acid Monohydrate Fine Granular	E 330
Lot number	: UJ946	Manufacturing date : 11/2019
Date issued	: 19/11/2019	Best use before : 11/2022
Date printed	: 25/11/2019	Customer Order : 3712755
CB Delivery Number	: 3722180636	
CB Material Number	: 0432776722	
Destination	: WIDNES	

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	8.12 / 8.60	% 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)	1.4	%	max 5.0
Sieving through	sieve test N°100 (150 µm)	2.4	%	max 5.0
Colour	UV/VIS (50% w/v; 405 nm 1 cm cell)	98.98	% T	98.00 - 100.00
Clarity of solution	Colour *	meets specification		meets requirements
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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	99.97 / 100.45	%	99.80 - 100.50
Sulphated ash/residue on ignition	FCC	meets specification		meets requirements
<u>Not tested methods:</u>				
Tridodecylamine				Not applicable for CB, only for solvent extracted citric acid.

** 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.