



Texan Minerals and Chemicals LLC



14090 Southwest Freeway, Suite 310, Sugar Land, TX 77478

Phone: 713-294-4180 Email: Mani@TMCgreen.com

CERTIFICATE OF ANALYSIS

CITRIC ACID ANHYDROUS GRANULAR 25 KG

REPORT DATE: 02/08/2024

MFG DATE: 07/04/2024

EXP DATE: 07/04/2027

PACKAGE SIZE: 25.00 KG

REQUIREMENTS	UNITS	RESULTS	SPECIFICATIONS	
			MIN	MAX
ASSAY (Anhydrous basis)	%w/w	99.99	90.50	100.50
WATER (Karl Fischer)	%w/w	0.094	0.000	0.500
COLOR OF SOLUTION (sol. 40% w/v, 420 nm)	%T	100.0	99.0	100.0
CLARITY OF SOLUTION (sol. 40% w/v)	NTU	0.612	0.000	3.000
**LEAD (as Pb)	ppm	0.012	0.000	0.500
**CALCIUM (as Ca)	ppm	25.34	0.00	75.00
**ARSENIC (as As)	ppm	0.012	0.000	1.000
**MERCURY (as Hg)	ppm	NOT DETECTED	0.000	1.000
**IRON (as Fe, sol 40% w/v, 670 nm)	ppm	0.54	0.00	5.00
**RESIDUE ON IGNITION	%w/w	0.013	0.000	0.050
**EVALUATION OF INSOLUBLES	-	PASS	PASS	PASS
**FOREIGN MATTER	-	PASS	PASS	PASS
**IDENTIFICATION (test IR)	-	PASS	PASS	PASS
**RELATED SUBSTANCES (isocitric acid)	-	PASS	PASS	PASS
**UV ABSORBANCE	-	PASS	PASS	PASS
*ORGANIC VOLATILE IMPURITIES	-	PASS	PASS	PASS
CARBONIZABLE SUBSTANCES (1g, 470 nm)	-	PASS	PASS	PASS
ODOR (Characteristic odor)	-	PASS	PASS	PASS
APPEARANCE	-	WHITE CRYSTAL	PASS	PASS
TASTE (Strong acid taste)	-	ACIDIC	ACIDIC	ACIDIC
**OXALATE (as oxalic acid dihydrate,520nm)	ppm	< 100	0	100
**HEAVY METALS (as Pb)	ppm	< 5.0	0.0	5.0
**SULPHATES (as sulphate, sol.40% w/v)	ppm	< 150	0	150
*TRIDODECYLAMINE	ppm	< 0.1	0.0	0.1
RETAINED ON 1400 um US STD 14	%w/w	0.53	0.00	5.00
PASS THRU 300 um US STD 50	%w/w	0.29	0.00	10.00

Sieve Test Results				
Microns	Mesh	Grams	%	Cumulative %
1000	18	19.29	19.29%	19.29%
841	20	15.96	15.96%	35.25%
595	30	47.71	47.71%	82.96%
400	40	8.58	8.58%	91.54%
297	50	1.59	1.59%	93.13%
	>50	6.87	6.87%	100%

**NOTE: Test made by skip_lot_model.

* NOTE: No potential such substances to be present in process.

This material conforms to current EP, Commission Regulation (EU) No. 231/2012 (E330), USP, FCC, JSFA & JP. The data in this COA has been verified by plant QA manager or designee.