

**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002F20421  
 Best Before: April, 2024  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Colorless crystals or a white, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.0
Water:	< 0.50 %	0.08
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	6.0
Particles through 0.20mm:	0 – 10 %	3.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material

Lot No.: 16002F10421

Best Before: April, 2024

Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Colorless crystals or a white, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.0
Water:	< 0.50 %	0.05
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	2.0
Particles through 0.20mm:	0 – 10 %	5.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material

Lot No.: 16002E10421

Best Before: March, 2024

Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	Colorless crystals or a white, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	99.9
Water:	< 0.50 %	0.03
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	5.0
Particles through 0.20mm:	0 – 10 %	1.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002B10419  
 Best Before: March, 2024  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	White, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.0
Water:	< 0.50 %	0.05
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	2.55
Particles through 0.20mm:	0 – 10 %	3.85
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002D10221  
 Best Before: February, 2024  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	White, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	99.9
Water:	< 0.50 %	0.07
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	5.0
Particles through 0.20mm:	0 – 10 %	2.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002C10221  
 Best Before: January, 2024  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	White, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.1
Water:	< 0.50 %	0.04
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	2.0
Particles through 0.20mm:	0 – 10 %	3.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002B10121  
 Best Before: December, 2023  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	White, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.1
Water:	< 0.50 %	0.07
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	6.0
Particles through 0.20mm:	0 – 10 %	1.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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**CERTIFICATE OF ANALYSIS**

Product: Citric Acid – Raw Material  
 Lot No.: 16002A10121  
 Best Before: December, 2023  
 Store in air tight containers; in a cool dry area; away from direct sunlight.

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance:	White, crystalline powder.	Complies
Odor:	Typical, practically odorless.	Complies
Solubility:	Very soluble in water. Freely soluble in 96% ethanol. Sparingly soluble in ether.	Complies
Assay:	99.70 – 100.30 %	100.1
Water:	< 0.50 %	0.07
Calcium:	≤ 30 ppm	Complies
Iron:	≤ 3 ppm	Complies
Arsenic:	≤ 1 ppm	Complies
Lead:	≤ 0.5 ppm	Complies
Mercury:	≤ 0.5 ppm	Complies
Chloride:	≤ 5 ppm	Complies
Oxalic acid/oxalate:	≤ 100 ppm	Complies
Sulphate:	< 100 ppm	Complies
Residue on ignition:	≤ 0.05 ppm	Complies
Sulphated ash:	≤ 0.05 %	Complies
Particles on Mesh 25 (0.71mm):	0 – 10 %	Complies
Particles on 0.63mm:	0 – 10 %	6.0
Particles through 0.20mm:	0 – 10 %	1.0
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

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