

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

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material

Lot No.: 16002A10319

Best Before: January, 2022

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 %	1.65
Particles through 0.20mm:	0 – 10 %	2.80
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material

Lot No.: 16002A00119

Best Before: December, 2021

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 %	1.05
Particles through 0.20mm:	0 – 10 %	2.00
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material
Lot No.: 16002-A22
Best Before: November, 2021
 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 %	0.04
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 %	1.40
Particles through 0.20mm:	0 – 10 %	0.55
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material

Lot No.: 16002-A21

Best Before: October, 2021

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 %	100.10
Water:	< 0.50 %	0.06
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 %	2.75
Particles through 0.20mm:	0 – 10 %	4.15
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material

Lot No.: 16002-A20

Best Before: October, 2021

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 %	100.10
Water:	< 0.50 %	0.06
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 %	3.95
Particles through 0.20mm:	0 – 10 %	0.85
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material
 Lot No.: 16002-A19
 Best Before: September, 2021
 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 %	100.20
Water:	< 0.50 %	0.06
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 %	2.95
Particles through 0.20mm:	0 – 10 %	4.40
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material
Lot No.: 16002-A18
Best Before: September, 2021
 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 %	100.10
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 %	3.40
Particles through 0.20mm:	0 – 10 %	5.00
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material
Lot No.: 16002-A17
Best Before: September, 2021
 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 %	100.17
Water:	< 0.50 %	0.06
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 %	3.40
Particles through 0.20mm:	0 – 10 %	5.00
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

CERTIFICATE OF ANALYSIS

Product: Citric Acid – Raw Material

Lot No.: 16002-A16

Best Before: July, 2021

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 %	100.17
Water:	< 0.50 %	0.06
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 %	2.30
Particles through 0.20mm:	0 – 10 %	5.70
Particles < Mesh 100 (0.150mm):	0 – 10 %	Complies

Disclaimer & Caution

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.