



# SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2021

Date Updated: March 30, 2021

## SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----

Product Name Citric acid, monohydrate  
 Product Code(s) C2123  
 Recommended Use For Laboratory Research Use Only  
 Not for Human or Animal Drug Use

Supplier Bio Basic Inc.  
 Address 20 Konrad Crescent, Markham, Ontario,  
 Canada, L3R 8T4  
 Telephone (905) 474 4493  
 Fax (905) 474 5794  
 For Chemical Emergency Phone# (416) 995 9730

## SECTION 2. ----- HAZARDS IDENTIFICATION -----

### GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)  
H319 Causes serious eye irritation.

Precautionary statement(s)  
 P264 Wash skin thoroughly after handling.  
 P280 Wear eye protection/ face protection.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight %
Citric acid monohydrate	201-069-1	5949-29-1	<100

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4. ----- FIRST-AID MEASURES-----

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

**Indication of any immediate medical attention and special treatment needed**

No data available

**SECTION 5. ----- FIRE FIGHTING MEASURES -----**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

Carbon oxides  
Combustible.

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data available

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.  
For personal protection see section 8.

**Environmental precautions**

Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**Reference to other sections**

For disposal see section 13.

**SECTION 7. ----- HANDLING AND STORAGE-----**

**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): 11: Combustible Solids

**Specific end use(s)**

Apart from the uses mentioned in section 1 no other specific uses are stipulated

**SECTION 8. - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - -**

**Exposure controls**

**Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Full contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

**Splash contact Material:**

Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Do not let product enter drains.

**SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -**

**Information on basic physical and chemical properties**

a) Appearance	Form: solid
b) Odour	odourless
c) Odour Threshold	No data available
d) pH	1.85 at 50 g/l at 25 °C (77 °F)
e) Melting point/freezing point	Melting point/range: 135 - 152 °C (275 - 306 °F)
f) Initial boiling point and boiling range	(decomposition)
g) Flash point	173.9 °C (345.0 °F)
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	< 0.01 hPa at 25 °C (77 °F) - (anhydrous substance)
l) Vapour density	No data available
m) Relative density	1.54 g/cm <sup>3</sup> at 20 °C (68 °F)
n) Water solubility	ca.880 g/l at 20 °C (68 °F)
o) Partition coefficient: n-octanol/water	log Pow: -1.72 at 20 °C (68 °F) - (anhydrous substance), Bioaccumulation is not expected.
p) Auto-ignition temperature	No data available
q) Decomposition temperature	> 170 °C (> 338 °F) -
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**Other safety information**

No data available

**SECTION 10. -----STABILITY AND REACTIVITY -----**

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

No data available

**Incompatible materials**

No data available

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Mouse - male and female - 5,400 mg/kg (OECD Test Guideline 401)

Remarks: (anhydrous substance) LD50 Oral - Rat - male - 11,700 mg/kg (OECD Test Guideline 401)

Remarks: (anhydrous substance)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Remarks: (anhydrous substance)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404) Remarks: (anhydrous substance)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe irritations (OECD Test Guideline 405)

Remarks: (anhydrous substance)

#### Respiratory or skin sensitisation

##### Germ cell mutagenicity

Ames test

Salmonella typhimurium Result: negative (anhydrous substance)

OECD Test Guideline 475 Rat - male - Bone marrow Result: negative (anhydrous substance)

##### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

##### Reproductive toxicity

##### Specific target organ toxicity - single exposure

Acute oral toxicity - In high doses:, Irritation of mucous membranes, Pain, Bloody vomiting Acute inhalation toxicity - Possible damages:, Irritation symptoms in the respiratory tract.

##### Specific target organ toxicity - repeated exposure

No data available

##### Aspiration hazard

No data available

##### Additional Information

RTECS: GE7810000

Vomiting, Diarrhoea, Damage to tooth enamel., Dermatitis

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Substance which occurs in the human body under physiological conditions. Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

### Toxicity

Toxicity to fish	LC50 - Leuciscus idus (Golden orfe) - 440 - 760 mg/l - 96 h Remarks: (anhydrous substance)(IUCLID)
Toxicity to daphnia and other aquatic invertebrates	EC5 - E.sulcatum - 485 mg/l - 72 h Remarks: (anhydrous substance)(maximum permissible toxic concentration)(Lit.) EC50 - Daphnia magna (Water flea) - ca. 120 mg/l - 72 h Remarks: (anhydrous substance)(IUCLID)
Toxicity to algae	IC5 - M.aeruginosa - 80 mg/l - 8 d Remarks: (anhydrous substance)(maximum permissible toxic concentration)(Lit.)
Toxicity to bacteria	EC5 - Pseudomonas putida - > 10,000 mg/l - 16 h Remarks: (anhydrous substance)(Lit.)

### Persistence and degradability

Biodegradability Result: 98 % - Readily eliminated from water (OECD Test Guideline 302B)  
Remarks: (anhydrous substance)

Biochemical Oxygen Demand (BOD) 481 mg/g  
Remarks: (External MSDS)

Chemical Oxygen Demand (COD) 685 mg/g  
Remarks: (External MSDS)

Theoretical oxygen demand 686 mg/g  
Remarks: (Lit.)

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### Other adverse effects

Additional ecological Harmful effect due to pH shift. information  
Discharge into the environment must be avoided.

## SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

**SECTION 14. ----- TRANSPORT INFORMATION -----**

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**SECTION 15. ----- REGULATORY INFORMATION -----**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

Further information: no limited for paper copy, just for internal uses.  
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**Issuing Date:** 30-Mar-2021

**End of SDS**