



Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

CITRIC ACID MONOHYDRATE 99.5% AR

PRODUCT CODE : O-5065

CAS No : 5949-29-1

FORMULA : $\text{C}_6\text{H}_8\text{O}_7 \cdot \text{H}_2\text{O}$

UN No : Not Applicable

website : www.labotiq.net

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MSDS Number : 0109

Date : February 19th, 2025

Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Name** : CITRIC ACID MONOHYDRATE 99,5%
- Synonyms** : 2-Hydroxypropane-1,2,3-tricarboxylic acid monohydrate
- CAS No.** : 5949-29-1
- HS Code** : 2918 1400
- Chemical Formula** : C₆H₈O₇. H₂O
- Molecular Weight** : 210,14 g/mol
- Product Code** : O-5065
- Brand** : Labotiq
- 1.2 Manufacturer** : Labotiq
- Address** : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
- Website** : www.labotiq.net
- Email** : labotiq.id@gmail.com
- For information** : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
- Emergency number** : +6281316894650
- 1.3 Application** : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Eye irritation, (Category 2) H319: Causes serious eye irritation.
- Specific target organ toxicity – single exposure, (Category 3), Respiratory system H335: May cause respiratory irritation.

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

P280

Wear eye protection/ face protection.

P304 + P340 + P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

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P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Warning

Hazard statement(s)

none

Precautionary statement(s)

none

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 2-Hydroxypropane-1,2,3-tricarboxylic acid monohydrate
 Formula : C₆H₈O₇ · H₂O
 Molecular weight : 210,14 g/mol
 CAS-No. : 5949-29-1

3.2 Mixture

Component	Classification	Concentration
Citric acid monohydrate CAS-No. 5949-29-1 EC-No. 201-069-1	Eye Irrit. 2; STOT SE 3; H319, H335	<= 100 %

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

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If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂)

Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

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6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

No data available

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill® L

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Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: crystalline
	Colour: white
Odour	odorless
Odour Threshold	No data available
pH	1,8 at 50 g/l at 20 °C
Melting point/freezingpoint	Melting point/ range: 135 - 152 °C
Initial boiling point and boiling range	(decomposition)
Flash point	173,9 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	< 0,01 hPa at 25 °C - (anhydrous substance)
Vapour density	No data available
Density	1,54 g/cm ³ at 20 °C
Relative density	No data available
Water solubility	No data available
Partition coefficient: noctanol/water	log Pow: -1,72 at 20 °C - (anhydrous substance), Bioaccumulation is not expected.
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other safety information

Relative vapor density 7,26 - (Air = 1.0)

SECTION 10: Stability and reactivity

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10.1 Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature)

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Metals, Oxidizing agents, Bases, Reducing agents

10.4 Conditions to avoid

Strong heating

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

LD50 Oral - Mouse - male and female - 5.400 mg/kg (OECD Test Guideline 401)

Remarks: The value is given in analogy to the following substances: citric acid

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

Remarks: The value is given in analogy to the following substances: citric acid

Skin corrosion/irritation

Skin - Rabbit

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

Remarks: The value is given in analogy to the following substances: citric acid

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes. (OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: citric acid

Remarks: (ECHA)

Respiratory or skin sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): micronucleus.

Test system: Human lymphocytes

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Metabolic activation: without metabolic activation
Method: OECD Test Guideline 487
Result: positive
Test Type: Chromosome aberration test
Species: Rat
Cell type: Bone marrow
Application
Route: Oral
Method: OECD Test Guideline 475
Result: negative
Test Type: dominant lethal test
Species: Rat
Application Route: Oral
Method: Regulation (EC) No. 440/2008, Annex, B.22
Result: negative
Remarks: The value is given in analogy to the following substances: citric acid

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Remarks: The value is given in analogy to the following substances: citric acid

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: GE7350000

Vomiting, Diarrhea, Damage to tooth enamel., Dermatitis To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

LC50 - Leuciscus idus (Golden orfe) - 440 - 760 mg/l - 96 h

Remarks: (IUCLID) The value is given in analogy to the following substances: citric acid

Toxicity to algae

IC5 - Scenedesmus quadricauda (Green algae) - 640 mg/l - 7 d Remarks: (maximum permissible toxic concentration) (Lit.)

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The value is given in analogy to the following substances: citric acid (Citric acid monohydrate)

Toxicity to bacteria

Remarks: (maximum permissible toxic concentration) (Lit.)

The value is given in analogy to the following substances: citric acid (Citric acid monohydrate)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 97 % - Readily biodegradable. (OECD Test Guideline 301B)

Biochemical Oxygen Demand (BOD) 526 mg/g

Remarks: (IUCLID)

Chemical Oxygen Demand (COD) 728 mg/g

Remarks: (IUCLID)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

Endocrine disrupting properties

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: -

IMDG: -

IATA: -

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14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user**Further information**

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use**Other regulations**

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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