Tartaric Acid Assay Kit (Liquid Ready™)

Kit Product

Kit identification

Trade name : Tartaric Acid Assay Kit (Liquid Ready™)
Product code : K-TARTLQ
Part Number(s) : K-TARTLQ|700007893

Details of the supplier of the Kit safety information sheet

Manufacturer
Megazyme
Bray Business Park
Bray, County Wicklow, A98 YV29
Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.com

Importer
Neogen Corporation
620 Lesher Place
Lansing, Michigan 48912
United States of America
T 800.234.5333
sds@neogen.com - https://www.neogen.com/

General information

Restrictions on use : Do not use kit components from one kit with any other kit.
General description : This is a test kit that is comprised of several individual components, listed below, each of which may have its own Safety Data Sheet (SDS). Articles, and otherwise immobilized and inaccessible chemicals, do not have a Safety Data Sheet in this packet.

Kit contents

Name	GHS classification
Reagent 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Reagent 2	Muta. 2, H341 STOT RE 1, H372 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Tartaric Acid Calibrator (6 g/L)	Carc. 1A, H350

Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated

DOT	TDG	IMDG	IATA
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

Transport in bulk

Not applicable

Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Reagent 1
Product code : KC-TARTLQ1

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals,Scientific research and development
Restrictions on use : Do not use kit components from one kit with any other kit.

1.4. Supplier's details

Manufacturer
Megazyme
Bray Business Park
Bray, County Wicklow, A98 YV29
Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.com

1.5. Emergency phone number

Emergency number : +353 12861220 [9 am to 5 pm GMT - Monday to Friday]

Country/Area	Organization	Emergency number
United States	Spill/CHEMTREC. Medical.	1-800-424-9300 1-800-498-5743

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
Hazard statements (GHS US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing

protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice or attention.
P337+P313 - If eye irritation persists: Get medical advice or attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

13.61% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
13.61% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
22.01% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Acetic acid	CAS-No.: 64-19-7	5 – 10	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Aquatic Acute 3, H402 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Acetic acid (64-19-7)	
USA - ACGIH® - Threshold Limit Values	
Local name	Acetic acid
ACGIH® TLV® TWA	25 mg/m³
	10 ppm
ACGIH® TLV® STEL	37 mg/m³
	15 ppm
Remark (ACGIH®)	TLV® Basis: Sensory irr; Burns (chemical); Pulm func
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Acetic acid
OSHA PEL TWA	25 mg/m³
	10 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Acetic acid
Cal/OSHA PEL (OEL TWA)	25 mg/m³
	10 ppm
Cal/OSHA STEL	37 mg/m³
	15 ppm
Cal/OSHA C	40 ppm
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Acetic acid
NIOSH REL 10h TWA	10 ppm
NIOSH REL STEL	15 ppm
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Aqueous solution.
Color	:	Clear
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	4.5
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Reagent 1	
Unknown acute toxicity (GHS US)	13.61% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 13.61% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 22.01% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Acetic acid (64-19-7)	
LD50 oral rat	3310 mg/kg Source: ECHA Registered substances
LD50 oral	3310 mg/kg
LD50 dermal rabbit	1060 mg/kg Source: HSDB, NITE
LD50 dermal	1060 mg/kg
LC50 Inhalation - Rat [ppm]	16000 ppm Source: ChemIDPlus
ATE US (oral)	3310 mg/kg body weight
ATE US (dermal)	1060 mg/kg body weight
ATE US (gases)	16000 ppmV/4h
ATE US (vapors)	16000 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: 4.5

Acetic acid (64-19-7)	
pH	2.4 (6 %)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 4.5

Acetic acid (64-19-7)	
pH	2.4 (6 %)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Acetic acid (64-19-7)	
NOAEL (oral,rat,90 days)	290 mg/kg body weight Animal: rat, Animal sex: male

Aspiration hazard : Not classified

Acetic acid (64-19-7)	
Viscosity, kinematic	No data available in the literature

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Acetic acid (64-19-7)	
LC50 - Fish [1]	> 1000 mg/l
EC50 - Crustacea [1]	65 mg/l
LC50 - Fish [2]	> 300.82 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [2]	> 300.82 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	4.51 mg/l Source: ECHA
EC50 72h - Algae [2]	> 300.82 mg/l Test organisms (species): Skeletonema costatum
ErC50 algae	> 1000 mg/l

12.2. Persistence and degradability

Reagent 1	
Persistence and degradability	Not rapidly degradable

Acetic acid (64-19-7)	
Persistence and degradability	Biodegradable in the soil, Does not contain any not readily biodegradable component(s).

12.3. Bioaccumulative potential

Acetic acid (64-19-7)	
Partition coefficient n-octanol/water (Log Pow)	≤ -0.503
Bioaccumulative potential	Does not contain bioaccumulative component(s).

12.4. Mobility in soil

Acetic acid (64-19-7)	
Surface tension	No data available in the literature
Ecology - soil	Contains component(s) with potential for mobility in the soil. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are exempt or present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Acetic acid (64-19-7)	
CERCLA RQ	5000 lb

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Revision date : 10/1/2026
Issue date : 9/12/2025

Full text of hazard classes and H-statements	
H226	Flammable liquid and vapor
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Reagent 2
Product code : KC-TARTLQ2

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals,Scientific research and development
Restrictions on use : Do not use kit components from one kit with any other kit.

1.4. Supplier's details

Manufacturer
Megazyme
Bray Business Park
Bray, County Wicklow, A98 YV29
Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.com

1.5. Emergency phone number

Emergency number : +353 12861220 [9 am to 5 pm GMT - Monday to Friday]

Country/Area	Organization	Emergency number
United States	Spill/CHEMTREC. Medical.	1-800-424-9300 1-800-498-5743

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Germ cell mutagenicity, Category 2	H341	Suspected of causing genetic defects.
Specific target organ toxicity — Repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402	Harmful to aquatic life.
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412	Harmful to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H341 - Suspected of causing genetic defects.
H372 - Causes damage to organs through prolonged or repeated exposure
H402 - Harmful to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust, fume, gas, mist, vapors, spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice or attention if you feel unwell.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Ammonium metavanadate	CAS-No.: 7803-55-6	1 – 5	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Muta. 2, H341 STOT RE 1, H372 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Get medical advice/attention if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.
For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Keep cool. Protect from sunlight.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Aqueous solution.
Color	:	Colorless
Odor	:	Odorless

Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Ammonium metavanadate (7803-55-6)	
LD50 oral rat	169 mg/kg (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))

Ammonium metavanadate (7803-55-6)	
LD50 dermal rat	> 2500 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LD50 dermal rabbit	2102 mg/kg Source: National Library of Medicine/Hazardous Substances Data Bank
LC50 Inhalation - Rat	2.51 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
ATE US (oral)	169 mg/kg body weight
ATE US (dermal)	2102 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	2.51 mg/l/4h
ATE US (dust, mist)	2.51 mg/l/4h

Skin corrosion/irritation : Not classified

Ammonium metavanadate (7803-55-6)	
pH	No data available in the literature

Serious eye damage/irritation : Not classified

Ammonium metavanadate (7803-55-6)	
pH	No data available in the literature

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Ammonium metavanadate (7803-55-6)	
NOAEL (oral,rat,90 days)	1.6 mg/kg body weight Animal: rat, Animal sex: male
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Ammonium metavanadate (7803-55-6)	
Viscosity, kinematic	Not applicable (solid)

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Harmful to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.

Ammonium metavanadate (7803-55-6)	
LC50 - Fish [1]	27800 µg/l (96 h, Limanda limanda, Flow-through system, Salt water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 0.21 mg/l Source: SIDS
EC50 72h - Algae [1]	> 0.56 mg/l Source: OECD Screening Information Data Set
ErC50 algae	2907 µg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Read-across, Growth rate)

12.2. Persistence and degradability

Reagent 2	
Persistence and degradability	Not rapidly degradable

Ammonium metavanadate (7803-55-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Ammonium metavanadate (7803-55-6)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Ammonium metavanadate (7803-55-6)	
Surface tension	No data available in the literature
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.
Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are exempt or present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Ammonium metavanadate	CAS-No. 7803-55-6	1 – 5%

Sodium hydroxide (1310-73-2)	
CERCLA RQ	1000 lb

Ammonium metavanadate (7803-55-6)	
CERCLA RQ	1000 lb

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Revision date : 7/28/2026
Issue date : 9/11/2025

Full text of hazard classes and H-statements	
H301	Toxic if swallowed
H319	Causes serious eye irritation
H332	Harmful if inhaled
H341	Suspected of causing genetic defects.
H372	Causes damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Tartaric Acid Calibrator (6 g/L)

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 9/11/2025 Revision date: 7/28/2026 Supersedes: 4/2/2026 Version: 4.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Tartaric Acid Calibrator (6 g/L)
Product code : KC-TARTLQ3

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals,Scientific research and development
Restrictions on use : Do not use kit components from one kit with any other kit.

1.4. Supplier's details

Manufacturer
Megazyme
Bray Business Park
Bray, County Wicklow, A98 YV29
Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.com

1.5. Emergency phone number

Emergency number : +353 12861220 [9 am to 5 pm GMT - Monday to Friday]

Country/Area	Organization	Emergency number
United States	Spill/CHEMTREC. Medical.	1-800-424-9300 1-800-498-5743

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Carcinogenicity, Category 1A H350 May cause cancer.
Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H350 - May cause cancer.
Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.

P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Sulfuric acid	CAS-No.: 7664-93-9	0.1 – 0.5	Met. Corr. 1, H290 Skin Corr. 1, H314 Eye Dam. 1, H318 Carc. 1A, H350 Aquatic Chronic 3, H412

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : None under normal conditions.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	:	No fire hazard.
Explosion hazard	:	No direct explosion hazard.
Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment	:	Wear recommended personal protective equipment.
Emergency procedures	:	Only qualified personnel equipped with suitable protective equipment may intervene.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions	:	Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment	:	Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	:	Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	:	Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly.
Hygiene measures	:	Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up.
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Sulfuric acid (7664-93-9)	
USA - ACGIH® - Threshold Limit Values	
Local name	Sulfuric acid
ACGIH® TLV® TWA	0.2 mg/m³ (T - Thoracic particulate matter)
Remark (ACGIH®)	TLV® Basis: Mucostasis; Pulm func. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2026
USA - OSHA - Occupational Exposure Limits	
Local name	Sulfuric acid
OSHA PEL TWA	1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Sulfuric acid
Cal/OSHA PEL (OEL TWA)	0.1 mg/m³
Cal/OSHA STEL	3 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Sulfuric acid
NIOSH REL 10h TWA	1 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Aqueous solution.
Color	:	Colorless
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Sulfuric acid (7664-93-9)	
LD50 oral rat	2140 mg/kg body weight (Rat, Experimental value, Oral, 14 day(s))
LD50 oral	2140 mg/kg
LC50 Inhalation - Rat	0.375 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
LC50 Inhalation - Rat (Dust/Mist)	0.375 mg/l/4h
LC50 Inhalation - Rat (Vapors)	0.375 mg/l/4h
ATE US (oral)	2140 mg/kg body weight
ATE US (vapors)	0.375 mg/l/4h
ATE US (dust, mist)	0.375 mg/l/4h

Skin corrosion/irritation : Not classified

Sulfuric acid (7664-93-9)	
pH	0.3 Source: HSDB

Serious eye damage/irritation : Not classified

Sulfuric acid (7664-93-9)	
pH	0.3 Source: HSDB

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : May cause cancer.

Sulfuric acid (7664-93-9)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Sulfuric acid (7664-93-9)	
Viscosity, kinematic	12.228 mm²/s

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : None under normal conditions.

Symptoms/effects after eye contact : None under normal conditions.

Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Sulfuric acid (7664-93-9)	
LC50 - Fish [1]	16 – 28 mg/l (96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Lethal)
ErC50 algae	> 100 mg/l
NOEC (chronic)	0.15 mg/l Test organisms (species): other:
NOEC chronic fish	0.025 mg/l
NOEC chronic crustacea	0.15 mg/l

12.2. Persistence and degradability

Tartaric Acid Calibrator (6 g/L)	
Persistence and degradability	Not rapidly degradable

Sulfuric acid (7664-93-9)	
Persistence and degradability	Biodegradability: not applicable.
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Sulfuric acid (7664-93-9)	
Partition coefficient n-octanol/water (Log Pow)	-2.2 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Sulfuric acid (7664-93-9)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector’s sorting instructions.

Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations.
Additional information	:	Do not re-use empty containers.
Ecological waste information	:	The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are exempt or present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Sulfuric acid (7664-93-9)	
CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

15.2. International regulations

No additional information available

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 7/28/2026

Issue date : 9/11/2025

Full text of hazard classes and H-statements	
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.