

Section 1 - Identification

Product Identifier

Product Name POTATO DEXTROSE AGAR BASE

Recommended Use Laboratory chemicals.
Uses advised against No Information available

| | |
|--------------------------------|---|
| Product Code | R454312, R454314 |
| Address | Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand |
| Emergency Tel. | CHEMTREC® 09 980 6780 or +64 9 980 6780 |
| Telephone / Fax Numbers | Tel: 09 980 6700 Fax: 09 980 6788 |
| E-mail address | <u>ANZinfo@thermofisher.com</u> |

Section 2 - Hazard(s) Identification

Classification under Work Safe New Zealand

Not classified as hazardous according to criteria of EPA New Zealand

GHS Classification

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Based on available data, the classification criteria are not met

Environmental hazards

Based on available data, the classification criteria are not met

Label Elements

None required

Other hazards which do not result in classification

This product does not contain any known or suspected endocrine disruptors

Section 3 - Composition and Information on Ingredients

| Component | CAS No | Weight % |
|--|------------|----------|
| Caseins, hydrolyzates | 65072-00-6 | 3.82 |
| Copper (II) sulfate pentahydrate (1:1:5) | 7758-99-8 | 0.003 |
| Soluble Starch | 9005-84-9 | 10.2 |
| Agar | 9002-18-0 | 33.14 |
| Yeast, ext. | 8013-01-2 | 16.57 |
| Citric acid | 77-92-9 | 0.59 |
| Gelatins, hydrolyzates | 68410-45-7 | 3.82 |
| Glucose | 50-99-7 | 31.86 |

Section 4 - First Aid Measures

Description of first aid measures

| | |
|--|--|
| New Zealand Emergency Tel. | CHEMTREC® 09 980 6780 or +64 9 980 6780 |
| Inhalation | Remove to fresh air. |
| Eye Contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin Contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| First Aid Facilities | Eyewash, safety shower and washroom. |
| Most important symptoms and effects | No information available. |
| Notes to Physician | Treat symptomatically. |

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

None under normal use conditions.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6 - Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures**Emergency procedures**

Ensure adequate ventilation.

Environmental Precautions

See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Prevent product from entering drains.

Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage**Precautions for Safe Handling****Advice on safe handling**

Ensure adequate ventilation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

Conditions for Safe Storage, Including any Incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place.

Incompatible Materials

None known.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection**Control parameters****Exposure limits**

UK - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020.

ACGIH - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace.

| Component | New Zealand WEL | Australia | ACGIH TLV | The United Kingdom |
|--|-----------------|-----------|--------------------------|---|
| Copper (II) sulfate pentahydrate (1:1:5) | | | TWA: 1 mg/m ³ | STEL: 2 mg/m ³ 15 min TWA: 1 mg/m ³ 8 hr |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Appropriate engineering controls**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation

or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Individual protection measures, such as personal protective equipment

Eye Protection Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|--------------------|-----------------------------------|-----------------|-----------------|-----------------------|
| Disposable gloves. | See manufacturers recommendations | - | AS/NZS 2161 | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Skin and body protection Long sleeved clothing

Respiratory Protection Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices (or AUS/NZ equivalent) When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State Powder

Appearance

Odor No information available

Odor Threshold No data available

pH No information available

Melting Point/Range No data available

Softening Point No data available

Boiling Point/Range No information available

Flammability (liquid) No data available

Flammability (solid,gas) No information available

Explosion Limits No data available

Flash Point No information available

Method - No information available

Autoignition Temperature No data available

Decomposition Temperature No data available

Viscosity No data available

Water Solubility No information available

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component **log Pow**

Citric acid -1.72

Vapor Pressure No data available

Density / Specific Gravity No data available

Bulk Density No data available

Vapor Density No data available (Air = 1.0)
 Particle characteristics No data available

Other information

Section 10 - Stability and Reactivity

Reactivity None known, based on information available
 Stability Stable under normal conditions.
 Sensitivity to Mechanical Impact No information available
 Sensitivity to Static Discharge No information available
 Hazardous Polymerization No information available.
 Hazardous Reactions No information available.
 Conditions to Avoid Heat, flames and sparks.
 Incompatible Materials None known.

Hazardous Decomposition Products None under normal use conditions.

Section 11 - Toxicological Information

Acute Effects

Information on likely routes of exposure

Product Information

Inhalation Avoid breathing dust or spray mist.
 Eyes Not an expected route of exposure.
 Skin No known effect based on information supplied.
 Ingestion No known effect based on information supplied.

Numerical measures of toxicity

(a) acute toxicity;

Oral No data available
 Dermal No data available
 Inhalation No data available

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|--------------------------|--------------------------|-----------------|
| Copper (II) sulfate pentahydrate (1:1:5) | LD50 = 960 mg/kg (Rat) | LD50 > 8 g/kg (Rabbit) | |
| Agar | LD50 = 11 g/kg (Rat) | | |
| Citric acid | LD50 = 3 g/kg (Rat) | >2 g/kg (Rat) | |
| Glucose | 25.8 g/kg (Rat) | | |

| Component | ECHA (RAC) ATE (Oral) | ECHA (RAC) ATE (Dermal) | ECHA (RAC) ATE (Inhalation) |
|--|-----------------------|-------------------------|-----------------------------|
| Copper (II) sulfate pentahydrate (1:1:5) | ATE = 481 mg/kg bw | - | - |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;

Respiratory

No data available

Skin

No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs

No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed

No information available.

Section 12 - Ecological Information

Ecotoxicity

Aquatic ecotoxicity

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|--|---|----------------------|------------------|---|
| Copper (II) sulfate pentahydrate (1:1:5) | Onchorhynchus mykiss: LC50 = 0.1-2.5 mg/L/96h | EC50 = 0.24 mg/L/48h | | Photobacterium phosphoreum: EC50 = 0.25 mg/L/30min as Cu++ Photobacterium phosphoreum EC50= 1.3 mg/L/5 min as Cu++ |
| Citric acid | Leuciscus idus: LC50 = 440-760 mg/L/96h | EC50 = 120 mg/L/72h | | Photobacterium phosphoreum: EC50 = 14 mg/L/15 min |

Terrestrial ecotoxicity There is no data for this product

Persistence and Degradability No information available

Bioaccumulative Potential No information available

| Component | log Pow | Bioconcentration factor (BCF) |
|-------------|---------|-------------------------------|
| Citric acid | -1.72 | No data available |

Mobility No information available.

Other adverse effects**Endocrine Disruptor Information**
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors

This product does not contain any known or suspected substance

This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste treatment methods**Waste from Residues/Unused Products**

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

Other Information

Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations .

Section 14 - Transport Information

NZS 5433:2020

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

Environmental hazards

No hazards identified

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable, packaged goods

Special Precautions

No special precautions required. Please refer to the applicable dangerous goods regulations for additional information.

Additional information

None known

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture**National Regulations**

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as

pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

Prohibition or notification/licensing requirements

Shown below are details of specific prohibition/notifications or licensing requirements when they apply.

International Regulations

Ozone Depletion Potential This product does not contain any known or suspected substance

Persistent Organic Pollutant This product does not contain any known or suspected substance

Rotterdam Convention (PIC) Not applicable

Authorisation/Restrictions according to EU REACH

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--|---|---|---|
| Copper (II) sulfate pentahydrate (1:1:5) | - | Use restricted. See item 75. (see link for restriction details) | - |
| Citric acid | - | Use restricted. See item 75. (see link for restriction details) | - |

<https://echa.europa.eu/substances-restricted-under-reach>

International Inventories

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ENCS), Japan (ISHL), Canada (DSL/NDL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | NZIoC | AICS | EINECS | ELINCS | NLP | KECL | IECSC | TCSI |
|--|------------|-------|------|-----------|--------|-----|------------|-------|------|
| Caseins, hydrolyzates | 65072-00-6 | X | X | 265-363-1 | - | - | KE-05-0318 | X | X |
| Copper (II) sulfate pentahydrate (1:1:5) | 7758-99-8 | X | X | - | - | - | - | X | X |
| Soluble Starch | 9005-84-9 | X | X | 232-686-4 | - | - | KE-01773 | X | X |
| Agar | 9002-18-0 | X | X | 232-658-1 | - | - | KE-00275 | X | X |
| Yeast, ext. | 8013-01-2 | X | X | 232-387-9 | - | - | KE-05-1355 | X | X |
| Citric acid | 77-92-9 | X | X | 201-069-1 | - | - | KE-20831 | X | X |
| Gelatins, hydrolyzates | 68410-45-7 | X | X | 270-082-2 | - | - | KE-17576 | X | X |
| Glucose | 50-99-7 | X | X | 200-075-1 | - | - | KE-17727 | X | X |

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDL | PICCS | ISHL | ENCS |
|--|------------|------|---|-----|-----|-------|------|------|
| Caseins, hydrolyzates | 65072-00-6 | X | ACTIVE | X | - | X | X | X |
| Copper (II) sulfate pentahydrate (1:1:5) | 7758-99-8 | - | - | - | - | X | - | X |
| Soluble Starch | 9005-84-9 | X | ACTIVE | X | - | X | X | X |
| Agar | 9002-18-0 | X | ACTIVE | X | - | X | - | - |
| Yeast, ext. | 8013-01-2 | X | ACTIVE | X | - | X | - | - |
| Citric acid | 77-92-9 | X | ACTIVE | X | - | X | X | X |
| Gelatins, hydrolyzates | 68410-45-7 | X | ACTIVE | X | - | X | - | - |
| Glucose | 50-99-7 | X | ACTIVE | X | - | X | X | X |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Section 16 - Other Information

This safety data sheet complies with the requirements of the EPA Hazardous Substances (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

Legend

NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - Chinese Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

NZS 5433:2020 - Transport of Dangerous Goods on Land

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

WEL - Workplace Exposure Limit

DNEL - Derived No Effect Level

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

VOC - (Volatile Organic Compound)

AICS - Australian Inventory of Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

CAS - Chemical Abstracts Service

ACGIH - American Conference of Governmental Industrial Hygienists

PNEC - Predicted No Effect Concentration

OECD - Organisation for Economic Co-operation and Development

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

ADG - Australian Code for the Transport of Dangerous Goods by Road and Rail

LC50 - Lethal Concentration 50%

ATE - Acute Toxicity Estimate

RPE - Respiratory Protective Equipment

NOEC - No Observed Effect Concentration

BCF - Bioconcentration factor

PBT - Persistent, Bioaccumulative, Toxic

Key literature references and sources for data

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Revision Date 05-Jul-2023
Revision Summary Not applicable

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of Safety Data Sheet