



# D-Mannose/D-Fructose/D-Glucose Assay kit

## Kit SIS (Safety Information Sheet)

Date of issue (US):20/12/2017 Revision date (US):20/12/2017 Supersedes (US):24/01/2020 Version (US):1.1

### SECTION 1: Kit identification

#### 1.1. Kit identifier

Product name : D-Mannose/D-Fructose/D-Glucose Assay kit  
Product code : K-MANGL

#### 1.2. Details of the supplier of the Kit safety information sheet

Deltagen  
14 Pacific Place  
3137 Kilsyth - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

### SECTION 2: General information

This product is a Kit which consists of several independently packaged components

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

### SECTION 3: Kit contents

| Name  | General description | Quantity | Unit         | GHS US classification |
|---|---------------------|----------|--------------|-----------------------|
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 1) | Reagent             | 1        | pcs (pieces) | Eye Irrit. 2, H319    |
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3) | Reagent             | 1        | pcs (pieces) | Resp. Sens. 1, H334   |

| Name  | General description | Quantity | Unit         | GHS US classification |
|---|---------------------|----------|--------------|-----------------------|
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2) | Reagent             | 1        | pcs (pieces) | Not classified        |
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4) | Reagent             | 1        | pcs (pieces) | Not classified        |
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5) | Reagent             | 1        | pcs (pieces) | Not classified        |
| D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6) | Reagent             | 1        | pcs (pieces) | Not classified        |

### SECTION 4: General advice

No data available

### SECTION 5: Safe handling advice

Environmental precautions : Avoid release to the environment  
Storage conditions : Store in a well-ventilated place.  
Keep cool.  
Precautions for safe handling : Ensure good ventilation of the work station  
Wear personal protective equipment

### SECTION 6: First aid measures

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  
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  
Other medical advice or treatment : Treat symptomatically

### SECTION 7: Fire fighting measures

Protection during firefighting : Do not attempt to take action without suitable protective equipment

# D-Mannose/D-Fructose/D-Glucose Assay kit

## Kit SIS (Safety Information Sheet)

|  |  |   |
|--|--|---|
| Hazardous decomposition products in case of fire |  | Self-contained breathing apparatus<br>Complete protective clothing<br>: Toxic fumes may be released |
|--|--|---|

### SECTION 8: Other information

No data available



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)  
Product code : K-MANGL (Bottle 6)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

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.

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. 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".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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.

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 any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Type     |
|----------|
| Lab coat |

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                                  | : Liquid            |
| Color   | : Colorless         |
| Odor  | : None              |
| Odor threshold                                  | : No data available |
| pH  | : 10                |
| Melting point                                   | : Not applicable    |
| Freezing point                                  | : No data available |
| Boiling point                                   | : No data available |
| Flash point                                     | : No data available |
| Relative evaporation rate (butyl acetate=1)     | : 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 |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : No data available |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

### 9.2. Other information

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

Contact with acids liberates very toxic gas.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Acids.

### 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           |
| Skin corrosion/irritation                          | : Not classified<br>pH: 10 |
| Serious eye damage/irritation                      | : Not classified<br>pH: 10 |
| Respiratory or skin sensitization                  | : Not classified           |
| Germ cell mutagenicity                             | : Not classified           |
| Carcinogenicity                                    | : Not classified           |
| Reproductive toxicity                              | : Not classified           |
| Specific target organ toxicity – single exposure   | : Not classified           |
| Specific target organ toxicity – repeated exposure | : Not classified           |
| Aspiration hazard                                  | : Not classified           |
| Viscosity, kinematic                               | : No data available        |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 6)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

*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.*



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)  
Product code : K-MANGL (Bottle 5)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

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.

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. 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".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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.

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 any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Type     |
|----------|
| Lab coat |

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                                  | : Liquid            |
| Color   | : No data available |
| Odor  | : None              |
| Odor threshold                                  | : No data available |
| pH  | : 10                |
| Melting point                                   | : Not applicable    |
| Freezing point                                  | : No data available |
| Boiling point                                   | : No data available |
| Flash point                                     | : No data available |
| Relative evaporation rate (butyl acetate=1)     | : 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 |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : No data available |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

### 9.2. Other information

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.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 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           |
| Skin corrosion/irritation                          | : Not classified<br>pH: 10 |
| Serious eye damage/irritation                      | : Not classified<br>pH: 10 |
| Respiratory or skin sensitization                  | : Not classified           |
| Germ cell mutagenicity                             | : Not classified           |
| Carcinogenicity                                    | : Not classified           |
| Reproductive toxicity                              | : Not classified           |
| Specific target organ toxicity – single exposure   | : Not classified           |
| Specific target organ toxicity – repeated exposure | : Not classified           |
| Aspiration hazard                                  | : Not classified           |
| Viscosity, kinematic                               | : No data available        |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 5)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

*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.*



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)  
Product code : K-MANGL (Bottle 4)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

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.

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. 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".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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.

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 any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Type     |
|----------|
| Lab coat |

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                                  | : Liquid            |
| Color   | : milky             |
| Odor  | : None              |
| Odor threshold                                  | : No data available |
| pH  | : 10                |
| Melting point                                   | : Not applicable    |
| Freezing point                                  | : No data available |
| Boiling point                                   | : No data available |
| Flash point                                     | : No data available |
| Relative evaporation rate (butyl acetate=1)     | : 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 |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : No data available |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

### 9.2. Other information

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

Contact with acids liberates very toxic gas.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Acids.

### 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    |
| Skin corrosion/irritation                          | : Not classified    |
|  | pH: 10              |
| Serious eye damage/irritation                      | : Not classified    |
|  | pH: 10              |
| Respiratory or skin sensitization                  | : Not classified    |
| Germ cell mutagenicity                             | : Not classified    |
| Carcinogenicity                                    | : Not classified    |
| Reproductive toxicity                              | : Not classified    |
| Specific target organ toxicity – single exposure   | : Not classified    |
| Specific target organ toxicity – repeated exposure | : Not classified    |
| Aspiration hazard                                  | : Not classified    |
| Viscosity, kinematic                               | : No data available |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 4)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

*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.*



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)  
Product code : K-MANGL (Bottle 3)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Respiratory sensitization, Category 1 May cause an allergy or asthma symptoms or breathing difficulties if inhaled

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : May cause an allergy or asthma symptoms or breathing difficulties if inhaled  
Precautionary statements (GHS US) : Avoid breathing mist, spray, vapors.  
[In case of inadequate ventilation] wear respiratory protection.  
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a doctor, a POISON CENTER.  
Dispose of contents/container to

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name  | Common Name (Synonyms) | Product identifier  | %       | GHS US classification |
|---|------------------------|---------------------|---------|-----------------------|
| Kinase (phosphorylating), hexo-, Hexokinase |                        | (CAS-No.) 9001-51-8 | 0.1 – 1 | Resp. Sens. 1, H334   |

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
- 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.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- 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

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid breathing mist, spray, vapors.

##### 6.1.2. 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".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

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. Avoid breathing vapors, spray, mist.
- 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 any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing

| Type     |
|----------|
| Lab coat |

#### Respiratory protection:

Wear respiratory protection.

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : milky  
Odor : None  
Odor threshold : No data available  
pH : 10  
Melting point : Not applicable  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Relative evaporation rate (butyl acetate=1) : 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

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

|                      |                     |
|----------------------|---------------------|
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic   | : No data available |
| Explosion limits     | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

### 9.2. Other information

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

Contact with acids liberates very toxic gas.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

Acids.

### 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  |
| Skin corrosion/irritation                          | : Not classified<br>pH: 10  |
| Serious eye damage/irritation                      | : Not classified<br>pH: 10  |
| Respiratory or skin sensitization                  | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. |
| Germ cell mutagenicity                             | : Not classified  |
| Carcinogenicity                                    | : Not classified  |
| Reproductive toxicity                              | : Not classified  |
| Specific target organ toxicity – single exposure   | : Not classified  |
| Specific target organ toxicity – repeated exposure | : Not classified  |
| Aspiration hazard                                  | : Not classified  |
| Viscosity, kinematic                               | : No data available   |
| Symptoms/effects after inhalation                  | : May cause an allergy or asthma symptoms or breathing difficulties if inhaled. |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

No additional information available

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 3)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

*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.*



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Revision date: 01/24/2020

Supersedes: 12/20/2017

Version: 1.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)  
Product code : K-MANGL (Bottle 2)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

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.

#### 4.2. Most important symptoms and effects (acute and delayed)

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. 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".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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.

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 any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Type     |
|----------|
| Lab coat |

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                                  | : Solid             |
| Color   | : Colorless         |
| Odor  | : None              |
| Odor threshold                                  | : No data available |
| pH  | : 10                |
| Melting point                                   | : No data available |
| Freezing point                                  | : Not applicable    |
| Boiling point                                   | : No data available |
| Flash point                                     | : No data available |
| Relative evaporation rate (butyl acetate=1)     | : No data available |
| Flammability (solid, gas)                       | : Non flammable.    |
| Vapor pressure                                  | : No data available |
| Relative vapor density at 20 °C                 | : No data available |
| Relative density                                | : Not applicable    |
| Solubility                                      | : Soluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Auto-ignition temperature                       | : Not applicable    |
| Decomposition temperature                       | : No data available |
| Viscosity, kinematic                            | : No data available |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : Not applicable    |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

### 9.2. Other information

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.

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 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    |
| Skin corrosion/irritation                          | : Not classified    |
|  | pH: 10              |
| Serious eye damage/irritation                      | : Not classified    |
|  | pH: 10              |
| Respiratory or skin sensitization                  | : Not classified    |
| Germ cell mutagenicity                             | : Not classified    |
| Carcinogenicity                                    | : Not classified    |
| Reproductive toxicity                              | : Not classified    |
| Specific target organ toxicity – single exposure   | : Not classified    |
| Specific target organ toxicity – repeated exposure | : Not classified    |
| Aspiration hazard                                  | : Not classified    |
| Viscosity, kinematic                               | : No data available |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 2)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

No additional information available

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 01/24/2020

SDS US (GHS HazCom 2012)

*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.*



# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 1)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/20/2017

Version: 1.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 1)  
Product code : K-MANGL (Bottle 1)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Use as laboratory reagent

#### 1.3. Supplier

Deltagen  
14 Pacific Place  
Kilsyth, 3137 - Australia  
T +613-9728-3038 - F +613-9761-9562  
[info@deltagen.com.au](mailto:info@deltagen.com.au) - [www.deltagen.com](http://www.deltagen.com)

#### 1.4. Emergency telephone number

Emergency number : +613-9728-3038 [9 am to 5 pm GMT - Monday to Friday]

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Serious eye damage/eye irritation Category 2 Causes serious eye irritation

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning  
Hazard statements (GHS US) : Causes serious eye irritation  
Precautionary statements (GHS US) : Wash hands thoroughly after handling.  
Wear eye protection, protective clothing, protective gloves  
IF IN EYES: 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.

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

# D-Mannose/D-Fructose/D-Glucose Assay kit (Bottle 1)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Name               | Common Name (Synonyms)  | Product identifier  | %       | GHS US classification  |
|--------------------|---|---------------------|---------|--|
| triethanolamine    | 2,2',2''-nitrilotriethanol / 2,2',2''-nitrilo-tris(ethanol) / 2,2',2''-trihydroxytriethylamine / daltofen / ethanol, 2,2',2''-nitrilotri- / ethanol, 2,2',2''-nitrilotris- / nitrilo-2,2',2''-triethanol / sterolamide / sting-kill / TEA (=triethanolamine) / thiofaco T-35 / tri(2-hydroxyethyl)amine / triethanolamine-NG / triethylolamine / trihydroxyethylamine / trihydroxytriethylamine / tris(2-hydroxyethyl)amine / tris(hydroxyethyl)amine / trolamine | (CAS-No.) 102-71-6  | 10 – 20 | Not classified   |
| MAGNESIUM CHLORIDE | Magnesium chloride anhydrous / Magnesium dichloride / Magnesium chloride, anhydrous / MAGNESIUM CHLORIDE / Magnesium chloride (MgCl <sub>2</sub> )  | (CAS-No.) 7786-30-3 | 1 – 5   | Met. Corr. 1, H290<br>Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318 |

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

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- 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 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.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after eye contact : Eye irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

#### 5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

- 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

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

##### 6.1.2. 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".

#### 6.2. Environmental precautions

Avoid release to the environment.

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### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

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. Avoid contact with skin and eyes.  
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 any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 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/Personal protective equipment

#### Hand protection:

Protective gloves

| Type              | Material             | Permeation       | Thickness (mm) | Permeation |
|-------------------|----------------------|------------------|----------------|------------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) |                | 2 (< 1.5)  |

#### Eye protection:

Safety glasses

| Type           | Use     | Characteristics   |
|----------------|---------|-------------------|
| Safety glasses | Droplet | With side shields |

#### Skin and body protection:

Wear suitable protective clothing

| Type     |
|----------|
| Lab coat |

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device    | Filter type | Condition                       |
|-----------|-------------|---------------------------------|
| Dust mask | Type P1     | Protection for Liquid particles |

#### Personal protective equipment symbol(s):



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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|   |                     |
|---|---------------------|
| Physical state                                  | : Liquid            |
| Color   | : Colorless         |
| Odor  | : None              |
| Odor threshold                                  | : No data available |
| pH  | : 10                |
| Melting point                                   | : Not applicable    |
| Freezing point                                  | : No data available |
| Boiling point                                   | : No data available |
| Flash point                                     | : No data available |
| Relative evaporation rate (butyl acetate=1)     | : 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 |
| Viscosity, dynamic                              | : No data available |
| Explosion limits                                | : No data available |
| Explosive properties                            | : No data available |
| Oxidizing properties                            | : No data available |

#### 9.2. Other information

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

Contact with acids liberates very toxic gas.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

Acids.

#### 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 |

#### triethanolamine (102-71-6)

|               |   |
|---------------|---|
| LD50 oral rat | > 5000 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; 6400 mg/kg bodyweight; Rat) |
|---------------|---|

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| triethanolamine (102-71-6) |   |
|----------------------------|---|
| LD50 dermal rat            | > 5000 mg/kg (Rat)  |
| LD50 dermal rabbit         | > 10000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; >2000 mg/kg bodyweight; Rabbit) |

| MAGNESIUM CHLORIDE (7786-30-3) |            |
|--------------------------------|------------|
| LD50 oral rat                  | 2800 mg/kg |

|                                   |  |
|-----------------------------------|--|
| Skin corrosion/irritation         | : Not classified<br>pH: 10                 |
| Serious eye damage/irritation     | : Causes serious eye irritation.<br>pH: 10 |
| Respiratory or skin sensitization | : Not classified                           |
| Germ cell mutagenicity            | : Not classified                           |
| Carcinogenicity                   | : Not classified                           |

| triethanolamine (102-71-6) |                      |
|----------------------------|----------------------|
| IARC group                 | 3 - Not classifiable |

|  |                     |
|--|---------------------|
| Reproductive toxicity                              | : Not classified    |
| Specific target organ toxicity – single exposure   | : Not classified    |
| Specific target organ toxicity – repeated exposure | : Not classified    |
| Aspiration hazard                                  | : Not classified    |
| Viscosity, kinematic                               | : No data available |
| Symptoms/effects after eye contact                 | : Eye irritation.   |

## SECTION 12: Ecological information

### 12.1. Toxicity

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

| triethanolamine (102-71-6)     |   |
|--------------------------------|---|
| LC50 fish 1                    | 11800 mg/l  |
| EC50 other aquatic organisms 1 | 2038 mg/l waterflea                               |
| LC50 fish 2                    | 450 – 1000 mg/l (LC50; 96 h; Lepomis macrochirus) |
| EC50 other aquatic organisms 2 | 216 mg/l  |

| MAGNESIUM CHLORIDE (7786-30-3) |  |
|--------------------------------|--|
| LC50 fish 1                    | 1970 – 3880 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 Daphnia 1                 | 140 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])               |
| EC50 other aquatic organisms 1 | 548.4 mg/l waterflea   |
| EC50 other aquatic organisms 2 | > 100 mg/l   |

### 12.2. Persistence and degradability

| triethanolamine (102-71-6)      |  |
|---------------------------------|--|
| Persistence and degradability   | Photolysis in the air. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.02 g O <sub>2</sub> /g substance                     |
| Chemical oxygen demand (COD)    | 1.5 g O <sub>2</sub> /g substance                      |
| ThOD                            | 2.04 g O <sub>2</sub> /g substance                     |
| BOD (% of ThOD)                 | 0.02 % ThOD  |

| MAGNESIUM CHLORIDE (7786-30-3)  |                                   |
|---------------------------------|-----------------------------------|
| Persistence and degradability   | Biodegradability: not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable                    |
| Chemical oxygen demand (COD)    | Not applicable                    |
| ThOD                            | Not applicable                    |



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### 12.3. Bioaccumulative potential

| triethanolamine (102-71-6)                      |   |
|---|---|
| BCF fish 1                                      | < 3.9 (Cyprinus carpio; TEST DURATION: 6 WEEKS) |
| Partition coefficient n-octanol/water (Log Pow) | -2.53 – -1.32                                   |
| Bioaccumulative potential                       | Bioaccumulation unlikely.                       |
| MAGNESIUM CHLORIDE (7786-30-3)                  |   |
| Bioaccumulative potential                       | No bioaccumulation data available.              |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

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

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not applicable

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

| triethanolamine (102-71-6)  |  |
|---|--|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |  |
| MAGNESIUM CHLORIDE (7786-30-3)  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |  |

### 15.2. International regulations

#### CANADA

| MAGNESIUM CHLORIDE (7786-30-3)                        |  |
|---|--|
| Listed on the Canadian DSL (Domestic Substances List) |  |

#### EU-Regulations

| MAGNESIUM CHLORIDE (7786-30-3)   |  |
|--|--|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |  |

#### National regulations

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### MAGNESIUM CHLORIDE (7786-30-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

| Component                 | State or local regulations                                 |
|---------------------------|--|
| triethanolamine(102-71-6) | U.S. - New Jersey - Right to Know Hazardous Substance List |

## SECTION 16: Other information

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SDS US (GHS HazCom 2012)

*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.*