



L-Glutamine/Ammonia Assay Kit (Rapid)

Kit Safety Information Sheet

Date of issue: 05/06/2013

Revision date: 08/12/2017

Supersedes: 14/09/2016

Version: 1.3

SECTION 1: Kit identification

1.1. Kit identifier

Product name : L-Glutamine/Ammonia Assay Kit (Rapid)
Product code : K-GLNAM

1.2. Details of the supplier of the KIT safety information sheet

Megazyme
Bray Business Park
A98 YV29 Bray - Ireland
T +353 12861220 - F +353 12861264
cs@megazyme.com - www.megazyme.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 | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---------------------|----------|--------------|---|
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2) | Reagent | 1 | pcs (pieces) | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360 |
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3) | Reagent | 2 | pcs (pieces) | Acute Tox. 4 (Oral), H302 Aquatic Chronic 3, H412 |
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4) | Reagent | 2 | pcs (pieces) | Eye Irrit. 2, H319 Repr. 2, H361 Lact., H362 Aquatic Chronic 3, H412 |
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5) | Reagent | 1 | pcs (pieces) | Eye Irrit. 2, H319 Repr. 2, H361 Lact., H362 Aquatic Chronic 3, H412 |

No substance or mixture included in the following Kit components is hazardous according to Regulation (EC) No. 1272/2008 [CLP] and therefore the requirements of Regulation (EU) 2015/830 do not apply

| Name | General description | Quantity | Unit |
|--|---------------------|----------|--------------|
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7) | Reagent | 1 | pcs (pieces) |
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 1) | Buffer | 1 | pcs (pieces) |
| L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6) | Reagent | 1 | pcs (pieces) |

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

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| | |
|---------------------------------------|--|
| First-aid measures after ingestion | : Call a poison center or a doctor 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 Self-contained breathing apparatus Complete protective clothing |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released |

SECTION 8: Other information

No data available



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 18/01/2018

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)
Product code : K-GLNAM (Bottle 7)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml

No labelling required

2.3. Other hazards

No additional information available

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 REACH annex II

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)

Safety Data Sheet

according to Regulation (EU) 2015/830

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)

Safety Data Sheet

according to Regulation (EU) 2015/830

| Type | Use | Characteristics | Standard |
|----------------|------|-------------------|----------|
| Safety glasses | Dust | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type | Condition | Standard |
|-----------|-------------|--------------------------------|----------------|
| Dust mask | Type P1 | Protection for Solid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Solid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : Not applicable |
| Boiling point | : No data available |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : Not applicable |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)

Safety Data Sheet

according to Regulation (EU) 2015/830

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 |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Not classified |

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 7)

Safety Data Sheet

according to Regulation (EU) 2015/830

| ADR | IATA |
|--|----------------|
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 08/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)
Product code : K-GLNAM (Bottle 6)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml

No labelling required

2.3. Other hazards

No additional information available

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 REACH annex II

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)

Safety Data Sheet

according to Regulation (EU) 2015/830

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)

Safety Data Sheet

according to Regulation (EU) 2015/830

| Type | Use | Characteristics | Standard |
|----------------|---------|-------------------|----------|
| Safety glasses | Droplet | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type | Condition | Standard |
|-----------|-------------|---------------------------------|----------------|
| Dust mask | Type P1 | Protection for Liquid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : |

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)

Safety Data Sheet

according to Regulation (EU) 2015/830

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 |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Not classified |

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 6)

Safety Data Sheet

according to Regulation (EU) 2015/830

| ADR | IATA |
|--|----------------|
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|--------|--|
| EUH032 | Contact with acids liberates very toxic gas. |
|--------|--|

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 11/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)
Product code : K-GLNAM (Bottle 5)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2 H319
Reproductive toxicity, Category 2 H361
Reproductive toxicity, Additional category, Effects on or via lactation H362
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May cause harm to breast-fed children. Suspected of damaging fertility or the unborn child. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Warning

Hazardous ingredients :

lithium sulfate

Hazard statements (CLP) :

H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child.
H362 - May cause harm to breast-fed children.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, spray, vapours.
P263 - Avoid contact during pregnancy and while nursing.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830

EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml

Hazard pictograms (CLP) :



GHS08

Hazardous ingredients : lithium sulfate

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---------|--|
| lithium sulfate | (CAS-No.) 10377-48-7 (EC-No.) 233-820-4 | 20 - 30 | Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Lact., H362 Repr. 2, H361 Aquatic Chronic 3, H412 |
| sodium azide substance with a Community workplace exposure limit | (CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7 | < 0.1 | Acute Tox. 2 (Oral), H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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. Do not breathe mist, spray, vapours. Avoid contact with skin and eyes.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830

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. Notify authorities if product enters sewers or public waters.

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing. Do not breathe mist, spray, vapours.

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. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| sodium azide (26628-22-8) | | |
|---------------------------|---------------------------------|---------------------------------|
| EU | Local name | Sodium azide |
| EU | IOELV TWA (mg/m ³) | 0.1 mg/m ³ |
| EU | IOELV STEL (mg/m ³) | 0.3 mg/m ³ |
| EU | Notes | Skin |
| EU | Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

| Type | Use | Characteristics | Standard |
|----------------|---------|-------------------|----------|
| Safety glasses | Droplet | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

| Device | Filter type | Condition | Standard |
|-----------|-------------|---------------------------------|----------------|
| Dust mask | Type P1 | Protection for Liquid particles | EN 143, EN 149 |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : |

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 |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830

| lithium sulfate (10377-48-7) | |
|-----------------------------------|---|
| LD50 oral rat | 580 mg/kg rat |
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children. |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|--|
| Ecology - general | : Harmful to aquatic life with long lasting effects. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Harmful to aquatic life with long lasting effects. |

12.2. Persistence and degradability

| lithium sulfate (10377-48-7) | |
|---------------------------------|----------------------------------|
| Persistence and degradability | Biodegradability:Not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

12.3. Bioaccumulative potential

| lithium sulfate (10377-48-7) | |
|------------------------------|------------------|
| Bioaccumulative potential | Not established. |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |
| No supplementary information available | |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 5)

Safety Data Sheet

according to Regulation (EU) 2015/830

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|---------------------|---|
| Acute Tox. 2 (Oral) | Acute toxicity (oral), Category 2 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Lact. | Reproductive toxicity, Additional category, Effects on or via lactation |
| Repr. 2 | Reproductive toxicity, Category 2 |
| H300 | Fatal if swallowed. |
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation |
| H361 | Suspected of damaging fertility or the unborn child. |
| H362 | May cause harm to breast-fed children. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH032 | Contact with acids liberates very toxic gas. |

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 11/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)
Product code : K-GLNAM (Bottle 4)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2 H319
Reproductive toxicity, Category 2 H361
Reproductive toxicity, Additional category, Effects on or via lactation H362
Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May cause harm to breast-fed children. Suspected of damaging fertility or the unborn child. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Warning

Hazardous ingredients :

lithium sulfate

Hazard statements (CLP) :

H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child.
H362 - May cause harm to breast-fed children.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, spray, vapours.
P263 - Avoid contact during pregnancy and while nursing.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

EUH-statements : EUH208 - Contains Glutaminase, L-Glutamine amidohydrolase. May produce an allergic reaction.
EUH032 - Contact with acids liberates very toxic gas.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml

Hazard pictograms (CLP) :



GHS08

Hazardous ingredients : lithium sulfate

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---------|--|
| lithium sulfate | (CAS-No.) 10377-48-7 (EC-No.) 233-820-4 | 20 - 30 | Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Lact., H362 Repr. 2, H361 Aquatic Chronic 3, H412 |
| Glutaminase, L-Glutamine amidohydrolase | (CAS-No.) 9001-47-2 (EC-No.) 618-332-5 | 0.1 - 1 | Resp. Sens. 1, H334 |
| sodium azide substance with a Community workplace exposure limit | (CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7 | < 0.1 | Acute Tox. 2 (Oral), H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor 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 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

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

Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

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. Do not breathe mist, spray, vapours. 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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing. Do not breathe mist, spray, vapours.

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. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| sodium azide (26628-22-8) | | |
|---------------------------|---------------------------------|---------------------------------|
| EU | Local name | Sodium azide |
| EU | IOELV TWA (mg/m ³) | 0.1 mg/m ³ |
| EU | IOELV STEL (mg/m ³) | 0.3 mg/m ³ |
| EU | Notes | Skin |
| EU | Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

| Type | Use | Characteristics | Standard |
|----------------|---------|-------------------|----------|
| Safety glasses | Droplet | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

| Device | Filter type | Condition | Standard |
|-----------|-------------|---------------------------------|----------------|
| Dust mask | Type P1 | Protection for Liquid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : |

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

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

lithium sulfate (10377-48-7)

| | |
|---------------|---------------|
| LD50 oral rat | 580 mg/kg rat |
|---------------|---------------|

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

lithium sulfate (10377-48-7)

| | |
|---------------------------------|----------------------------------|
| Persistence and degradability | Biodegradability:Not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

12.3. Bioaccumulative potential

lithium sulfate (10377-48-7)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 4)

Safety Data Sheet

according to Regulation (EU) 2015/830

| ADR | | IATA | |
|--|--|----------------|--|
| 14.4. Packing group | | | |
| Not applicable | | Not applicable | |
| 14.5. Environmental hazards | | | |
| Not applicable | | Not applicable | |
| No supplementary information available | | | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|---------------------|--|
| Acute Tox. 2 (Oral) | Acute toxicity (oral), Category 2 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Lact. | Reproductive toxicity, Additional category, Effects on or via lactation |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Resp. Sens. 1 | Respiratory sensitisation, Category 1 |
| H300 | Fatal if swallowed. |
| H302 | Harmful if swallowed. |
| H319 | Causes serious eye irritation |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H362 | May cause harm to breast-fed children. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH032 | Contact with acids liberates very toxic gas. |
| EUH208 | Contains . May produce an allergic reaction. |

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 08/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)
Product code : K-GLNAM (Bottle 3)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Hazardous to the aquatic environment — H412
Chronic Hazard, Category 3
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) : Warning
Hazardous ingredients : 3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer; sodium azide
Hazard statements (CLP) : H302 - Harmful if swallowed.
H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml

Hazardous ingredients : 3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer; sodium azide

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|---------|---|
| 3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer | (CAS-No.) 1135-40-6 (EC-No.) 214-492-1 | 20 - 30 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 |
| sodium azide | (CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7 | 0.1 - 1 | Acute Tox. 2 (Oral), H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of 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 or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| sodium azide (26628-22-8) | | |
|---------------------------|---------------------------------|---------------------------------|
| EU | Local name | Sodium azide |
| EU | IOELV TWA (mg/m ³) | 0.1 mg/m ³ |
| EU | IOELV STEL (mg/m ³) | 0.3 mg/m ³ |
| EU | Notes | Skin |
| EU | Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

| Type | Use | Characteristics | Standard |
|----------------|------|-------------------|----------|
| Safety glasses | Dust | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type | Condition | Standard |
|-----------|-------------|--------------------------------|----------------|
| Dust mask | Type P1 | Protection for Solid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Colour : No data available
Odour : No data available

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

| | |
|--|---------------------|
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : Not applicable |
| Boiling point | : No data available |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : Not applicable |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

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) | : Oral: Harmful if swallowed. |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| | |
|----------------|---------------------------------|
| ATE CLP (oral) | 526.6484095218 mg/kg bodyweight |
|----------------|---------------------------------|

| | |
|-----------------------------------|------------------|
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects. Harmful to aquatic life.
Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 3)

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|-----------------------|---|
| Acute Tox. 2 (Oral) | Acute toxicity (oral), Category 2 |
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| H300 | Fatal if swallowed. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH032 | Contact with acids liberates very toxic gas. |

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 08/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)
Product code : K-GLNAM (Bottle 2)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Reproductive toxicity, Category 1B H360

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) : Danger
Hazardous ingredients : imidazole
Hazard statements (CLP) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation
H360 - May damage fertility or the unborn child.
Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

Labelling according to: exemption for packages of a capacity of 125ml or less

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) :

Danger

Hazardous ingredients :

imidazole

Hazard statements (CLP) :

H360 - May damage fertility or the unborn child.

Precautionary statements (CLP) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

EUH032 - Contact with acids liberates very toxic gas.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|--------|---|
| Triethanolamine substance with national workplace exposure limit(s) (IE) | (CAS-No.) 102-71-6 (EC-No.) 203-049-8 (REACH-no) 01-2119486482-31 | 5 - 10 | Not classified |
| imidazole | (CAS-No.) 288-32-4 (EC-No.) 206-019-2 (EC Index-No.) 613-319-00-0 | 1 - 5 | Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Repr. 1B, H360D |
| sodium azide substance with a Community workplace exposure limit | (CAS-No.) 26628-22-8 (EC-No.) 247-852-1 (EC Index-No.) 011-004-00-7 | < 0.1 | Acute Tox. 2 (Oral), H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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 : Only qualified personnel equipped with suitable protective equipment may intervene.

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. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Triethanolamine (102-71-6) | | |
|----------------------------|--|---------------------------------|
| Ireland | Local name | Triethanolamine |
| Ireland | OEL (8 hours ref) (mg/m ³) | 5 mg/m ³ |
| sodium azide (26628-22-8) | | |
| EU | Local name | Sodium azide |
| EU | IOELV TWA (mg/m ³) | 0.1 mg/m ³ |
| EU | IOELV STEL (mg/m ³) | 0.3 mg/m ³ |
| EU | Notes | Skin |
| EU | Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

Eye protection:

Safety glasses

| Type | Use | Characteristics | Standard |
|----------------|---------|-------------------|----------|
| Safety glasses | Droplet | With side shields | EN 166 |

Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

| Device | Filter type | Condition | Standard |
|-----------|-------------|---------------------------------|----------------|
| Dust mask | Type P1 | Protection for Liquid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : |

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.

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

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) |
| LD50 oral | 8000 mg/kg bodyweight |
| 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) |
| LD50 dermal | > 10000 mg/kg bodyweight |
| LC50 inhalation rat (Dust/Mist - mg/l/4h) | > 1.8 mg/l |

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility or the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

| Triethanolamine (102-71-6) | |
|--------------------------------|---|
| LC50 fish 1 | 11800 mg/l |
| LC50 fish 2 | 450 - 1000 mg/l (LC50; 96 h; Lepomis macrochirus) |
| EC50 other aquatic organisms 1 | 2038 mg/l waterflea |
| EC50 other aquatic organisms 2 | 216 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 ₂ /g substance |
| Chemical oxygen demand (COD) | 1.5 g O ₂ /g substance |
| ThOD | 2.04 g O ₂ /g substance |
| BOD (% of ThOD) | 0.02 % ThOD |

12.3. Bioaccumulative potential

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

| Triethanolamine (102-71-6) | |
|----------------------------|---|
| BCF fish 1 | < 3.9 (Cyprinus carpio; TEST DURATION: 6 WEEKS) |
| Log Pow | -2.53 - -1.32 |
| Bioaccumulative potential | Bioaccumulation unlikely. |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|---------------------|---|
| Acute Tox. 2 (Oral) | Acute toxicity (oral), Category 2 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 2)

Safety Data Sheet

according to Regulation (EU) 2015/830

| | |
|-------------------|---|
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Skin Corr. 1C | Skin corrosion/irritation, Category 1C |
| H300 | Fatal if swallowed. |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation |
| H360 | May damage fertility or the unborn child. |
| H360D | May damage the unborn child. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| EUH032 | Contact with acids liberates very toxic gas. |

SDS EU (REACH Annex II)

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.



L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 1)

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 05/06/2013

Revision date: 08/12/2017

Supersedes: 14/09/2016

Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Product name : L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 1)
Product code : K-GLNAM (Bottle 1)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Use as laboratory reagent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

2.3. Other hazards

No additional information available

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 REACH annex II

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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

L-Glutamine/Ammonia Assay Kit (Rapid) (Bottle 1)

Safety Data Sheet

according to Regulation (EU) 2015/830

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
|-------------------|----------------------|------------------|----------------|-------------|----------|
| Disposable gloves | Nitrile rubber (NBR) | 3 (> 60 minutes) | | 2 (< 1.5) | EN 374 |

Eye protection:

Safety glasses

| Type | Use | Characteristics | Standard |
|----------------|---------|-------------------|----------|
| Safety glasses | Droplet | With side shields | EN 166 |

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Skin and body protection:

Wear suitable protective clothing

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

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

| Device | Filter type | Condition | Standard |
|-----------|-------------|---------------------------------|----------------|
| Dust mask | Type P1 | Protection for Liquid particles | EN 143, EN 149 |



Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : |

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).

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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 |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Not classified |

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IATA |
|---|----------------|
| 14.1. UN number | |
| Not applicable | Not applicable |
| 14.2. UN proper shipping name | |
| Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | |
| Not applicable | Not applicable |
| 14.4. Packing group | |
| Not applicable | Not applicable |
| 14.5. Environmental hazards | |
| Not applicable | Not applicable |

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| ADR | IATA |
|--|------|
| No supplementary information available | |

14.6. Special precautions for user

- Overland transport

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

| | |
|--------|--|
| EUH032 | Contact with acids liberates very toxic gas. |
|--------|--|

SDS EU (REACH Annex II)

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.