SECTION 1: Kit identification

1.1. Kit identifier

Product name: L-Arginine/Urea/Ammonia Assay Kit
Product code: K-LARGE

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

<table>
<thead>
<tr>
<th>Name</th>
<th>General description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)</td>
<td>Buffer</td>
<td>1</td>
<td>pcs (pieces)</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360</td>
</tr>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 2)</td>
<td>Reagent</td>
<td>1</td>
<td>pcs (pieces)</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 3)</td>
<td>Reagent</td>
<td>1</td>
<td>pcs (pieces)</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)</td>
<td>Reagent</td>
<td>1</td>
<td>pcs (pieces)</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 5)</td>
<td>Reagent</td>
<td>1</td>
<td>pcs (pieces)</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name</th>
<th>General description</th>
<th>Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Arginine/Urea/Ammonia Assay Kit (Bottle 6)</td>
<td>Reagent</td>
<td>1</td>
<td>pcs (pieces)</td>
</tr>
</tbody>
</table>

SECTION 4: General advice

No data available

SECTION 5: Safe handling advice

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

SECTION 6: First aid measures

First-aid measures after eye contact: Rinse eyes with water as a precaution
First-aid measures after ingestion: Call a poison center 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
**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. **Product identifier**

Product form : Mixture  
Product name : L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)  
Product code : K-LARGE (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  
IE – A98 YV29 Bray – County Wicklow  
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- and EUH-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](image) ![GHS08](image)

- Signal word (CLP) : Danger
- Contains : 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 protective gloves/protective clothing/eye protection/face protection/ear protection
L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

EUH-statements

Labelling according to: exemption for packages of a capacity of 125ml or less
Hazard pictograms (CLP):

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/hearing protection.

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

2.3. Other hazards
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII
The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

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

Full text of H- and EUH-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.
L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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


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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures: Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store locked up. 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

8.1.1 National occupational exposure and biological limit values

<table>
<thead>
<tr>
<th>Triethanolamine (102-71-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ireland - Occupational Exposure Limits</td>
<td></td>
</tr>
<tr>
<td>Local name</td>
<td>Triethanolamine</td>
</tr>
<tr>
<td>OEL TWA [1]</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>sodium azide (26628-22-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EU - Indicative Occupational Exposure Limit (IOEL)</strong></td>
</tr>
<tr>
<td>Local name</td>
</tr>
<tr>
<td>IOEL TWA</td>
</tr>
<tr>
<td>IOEL STEL</td>
</tr>
<tr>
<td>Remark</td>
</tr>
<tr>
<td>Regulatory reference</td>
</tr>
</tbody>
</table>

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

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

8.2.2.1. Eye and face protection

**Eye protection:**
Safety glasses

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Droplet</td>
<td>clear, With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>
8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

<table>
<thead>
<tr>
<th>Skin and body protection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Standard</td>
</tr>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

Hand protection:
Protective gloves

<table>
<thead>
<tr>
<th>Hand protection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Material</strong></td>
</tr>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber (NBR)</td>
</tr>
</tbody>
</table>

8.2.2.3. Respiratory protection

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

<table>
<thead>
<tr>
<th>Respiratory protection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Device</strong></td>
<td><strong>Filter type</strong></td>
</tr>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards
No additional information available

8.2.3. 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: Not available
- Odour: None.
- Odour threshold: Not available
- Melting point: Not applicable
- Freezing point: Not available
- Boiling point: Not available
- Flammability: Not applicable
- Lower explosion limit: Not available
- Upper explosion limit: Not available
- Flash point: Not available
- Auto-ignition temperature: Not available
- Decomposition temperature: Not available
- pH: Not available
- Viscosity, kinematic: Not available
- Solubility: Soluble in water.
- Partition coefficient n-octanol/water (Log Kow): Not available
- Vapour pressure: Not available
- Vapour pressure at 50°C: Not available
- Density: Not available
- Relative density: Not available
- Relative vapour density at 20°C: Not available
Particle characteristics: Not applicable

**9.2. Other information**

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
No additional information available

**SECTION 10: Stability and reactivity**

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

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

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

**SECTION 11: Toxicological information**

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Acute toxicity (oral)</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value; 6400 mg/kg bodyweight; Rat)</td>
</tr>
<tr>
<td>LD50 oral</td>
<td>8000 mg/kg bodyweight</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 5000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 10000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; &gt;2000 mg/kg bodyweight; Rabbit)</td>
</tr>
<tr>
<td>LD50 dermal</td>
<td>&gt; 10000 mg/kg bodyweight</td>
</tr>
<tr>
<td>LC50 Inhalation - Rat (Dust/Mist)</td>
<td>&gt; 1.8 mg/l</td>
</tr>
</tbody>
</table>

**imidazole (288-32-4)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral</td>
<td>960 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>11 (25 %)</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.03.2022 (Revision date)

**SERIOUS EYE DAMAGE/IRRITATION**
Causes serious eye irritation.

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td>11 (25 %)</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitisation</strong></td>
<td>Not classified</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td>Not classified</td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IARC group</strong></td>
<td>3 - Not classifiable</td>
</tr>
<tr>
<td><strong>Reproductive toxicity</strong></td>
<td>May damage fertility or the unborn child.</td>
</tr>
<tr>
<td><strong>STOT-single exposure</strong></td>
<td>Not classified</td>
</tr>
<tr>
<td><strong>STOT-repeated exposure</strong></td>
<td>Not classified</td>
</tr>
<tr>
<td><strong>Aspiration hazard</strong></td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Viscosity, kinematic**
53,381 mm²/s

**11.2. Information on other hazards**
No additional information available

**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.

**Hazardous to the aquatic environment, short-term (acute)**
Not classified

**Hazardous to the aquatic environment, long-term (chronic)**
Not classified

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>EC50</th>
<th>NOEC</th>
<th>NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LC50 - Fish [1]</strong></td>
<td>11800 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LC50 - Fish [2]</strong></td>
<td>450 – 1000 mg/l (LC50; 96 h; Lepomis macrochirus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EC50 - Other aquatic organisms [1]</strong></td>
<td>2038 mg/l waterflea</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EC50 - Other aquatic organisms [2]</strong></td>
<td>216 mg/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**imidazole (288-32-4)**

<table>
<thead>
<tr>
<th>Test</th>
<th>EC50</th>
<th>NOEC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOEC chronic algae</strong></td>
<td>25 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

**Triethanolamine (102-71-6)**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Persistence and degradability</strong></td>
<td>Photolysis in the air. Readily biodegradable in water.</td>
</tr>
<tr>
<td><strong>Biochemical oxygen demand (BOD)</strong></td>
<td>0,02 g O₂/g substance</td>
</tr>
<tr>
<td><strong>Chemical oxygen demand (COD)</strong></td>
<td>1,5 g O₂/g substance</td>
</tr>
<tr>
<td><strong>ThOD</strong></td>
<td>2,04 g O₂/g substance</td>
</tr>
<tr>
<td><strong>BOD (% of ThOD)</strong></td>
<td>0,02 % ThOD</td>
</tr>
</tbody>
</table>
12.3. Bioaccumulative potential

Triethanolamine (102-71-6)

<table>
<thead>
<tr>
<th>BCF - Fish [1]</th>
<th>&lt; 3.9 (Cyprinus carpio; TEST DURATION: 6 WEEKS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition coefficient n-octanol/water (Log Pow)</td>
<td>-2.53 – -1.32</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>Bioaccumulation unlikely.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

Overland transport
Not applicable

Air transport
Not applicable
14.7. Maritime transport in bulk according to IMO instruments
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

REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 2 (Oral)</td>
<td>Acute toxicity (oral), Category 2</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment – Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment – Chronic Hazard, Category 1</td>
</tr>
<tr>
<td>EUH032</td>
<td>Contact with acids liberates very toxic gas.</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child.</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 1)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H360D</td>
<td>May damage the unborn child.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Repr. 1B</td>
<td>Reproductive toxicity, Category 1B</td>
</tr>
<tr>
<td>Skin Corr. 1C</td>
<td>Skin corrosion/irritation, Category 1, Sub-Category 1C</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

1.1. **Product identifier**

Product form : Mixture
Product name : L-Arginine/Urea/Ammonia Assay Kit (Bottle 2)
Product code : K-LARGE (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
IE – A98 Y29 Bray – County Wicklow
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
Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Harmful if swallowed.

2.2. **Label elements**

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

Hazard pictograms (CLP) : 

- GHS07

Signal word (CLP) : Warning
Contains : 3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer
Hazard statements (CLP) : H302 - Harmful if swallowed.
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P301+P332 - 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.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml
Hazardous ingredients : 3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer
2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-cyclohexylaminopropane-1-sulphonic acid, CAPS buffer</td>
<td>CAS-No.: 1135-40-6 EC-No.: 214-492-1</td>
<td>20 – 30</td>
<td>Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-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 : Rinse mouth. 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


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-Arginine/Urea/Ammonia Assay Kit (Bottle 2)
Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

## 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

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.
8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

- Eye and face protection
- Skin and body protection
- Hand protection
- Respiratory protection

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Dust</td>
<td>clear, With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

Hand protection:
Protective gloves

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Penetration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber</td>
<td>3 (&gt; 60 minutes)</td>
<td>2 (&lt; 1.5)</td>
<td>EN ISO 374</td>
<td></td>
</tr>
</tbody>
</table>

8.2.2.3. Respiratory protection

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

<table>
<thead>
<tr>
<th>Device</th>
<th>Filter type</th>
<th>Condition</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
<td>Protection for Solid particles</td>
<td>EN 143, EN 149</td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

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: Not available
- Odour: None
- Odour threshold: Not available
### L-Arginine/Urea/Ammonia Assay Kit (Bottle 2)

#### Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>pH solution</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure at 50°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapour density at 20°C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Particle size</td>
<td>Not available</td>
</tr>
</tbody>
</table>

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

---

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

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

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

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

---

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 2)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

L-Arginine/Urea/Ammonia Assay Kit (Bottle 2)

ATE CLP (oral) 1670.007 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-Arginine/Urea/Ammonia Assay Kit (Bottle 2)

Viscosity, kinematic: Not applicable

11.2. Information on other hazards

No additional information available

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.
Hazardous to the aquatic environment, short–term (acute): Not classified
Hazardous to the aquatic environment, long–term (chronic): 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. Endocrine disrupting properties

No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th></th>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

Overland transport
Not applicable

Air transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments
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

REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)
Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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

<table>
<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
</tr>
<tr>
<td>H302</td>
</tr>
<tr>
<td>H312</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

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-Arginine/Urea/Ammonia Assay Kit (Bottle 3)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 05.06.2013   Revision date: 14.03.2022   Supersedes version of: 19.12.2017   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-Arginine/Urea/Ammonia Assay Kit (Bottle 3)
Product code : K-LARGE (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
IE– A98 YV29 Bray – County Wicklow
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
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP) : !

Signal word (CLP) : Warning
Hazard statements (CLP) : H319 - Causes serious eye irritation.
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling.
                                      P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
                                      P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
                                      P337+P313 - If eye irritation persists: Get medical advice/attention.
EUH-statements : EUH032 - Contact with acids liberates very toxic gas.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml
L-Arginine/Urea/Ammonia Assay Kit (Bottle 3)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

No labelling required

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>lithium sulfate</td>
<td>CAS-No.: 10377-48-7 EC-No.: 233-820-4</td>
<td>10 – 20</td>
<td>Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>sodium azide substance with a Community workplace exposure limit</td>
<td>CAS-No.: 26628-22-8 EC-No.: 247-852-1 EC Index-No.: 011-004-00-7</td>
<td>&lt; 0,1</td>
<td>Acute Tox. 2 (Oral), H300 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact: Wash skin with plenty of water.
First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion: Call a poison center 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


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. 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.
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. Avoid contact with skin and eyes. 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

8.1.1 National occupational exposure and biological limit values

<table>
<thead>
<tr>
<th>sodium azide (26628-22-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU - Indicative Occupational Exposure Limit (IOEL)</td>
</tr>
<tr>
<td>Local name</td>
</tr>
<tr>
<td>IOEL TWA</td>
</tr>
<tr>
<td>IOEL STEL</td>
</tr>
<tr>
<td>Remark</td>
</tr>
<tr>
<td>Regulatory reference</td>
</tr>
</tbody>
</table>

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available
8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Droplet</td>
<td>clear, With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

Hand protection:
Protective gloves

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Penetration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber (NBR)</td>
<td>3 (&gt; 60 minutes)</td>
<td>2 (&lt; 1.5)</td>
<td></td>
<td>EN ISO 374</td>
</tr>
</tbody>
</table>

8.2.2.3. Respiratory protection

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

<table>
<thead>
<tr>
<th>Device</th>
<th>Filter type</th>
<th>Condition</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
<td>Protection for Liquid particles</td>
<td>EN 143, EN 149</td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards
No additional information available
L-Arginine/Urea/Ammonia Assay Kit (Bottle 3)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>milky.</td>
</tr>
<tr>
<td>Odour</td>
<td>None.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water</td>
<td>Log Kow</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure at 50°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapour density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
No additional information available

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available
10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

<table>
<thead>
<tr>
<th>lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>580 mg/kg rat</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>8 (4 %)</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>8 (4 %)</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

11.2. Information on other hazards

No additional information available

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.

| Hazardous to aquatic environment, short-term (acute) | Not classified |
| Hazardous to aquatic environment, long-term (chronic) | Not classified |

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: Not applicable.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
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. Endocrine disrupting properties

No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

Overland transport
Not applicable

Air transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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:

<table>
<thead>
<tr>
<th>Code</th>
<th>H-Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 2 (Oral)</td>
<td>Acute toxicity (oral), Category 2</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment – Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment – Chronic Hazard, Category 1</td>
</tr>
<tr>
<td>EUH032</td>
<td>Contact with acids liberates very toxic gas.</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

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-Arginine/Urea/Ammonia Assay Kit (Bottle 4)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 05.06.2013  Revision date: 14.03.2022  Supersedes version of: 19.12.2017  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-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Product code : K-LARGE (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
IE – A96 YV29 Bray – County Wicklow
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
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects
Causess serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

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

Hazard pictograms (CLP) : !
GHS07

Signal word (CLP) : Warning
Hazard statements (CLP) : H319 - Causes serious eye irritation.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Precautionary statements (CLP) :
EUH302 - Contact with acids liberates very toxic gas.
EUH208 - Contains Urease. May produce an allergic reaction.

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

No labelling required

2.3. Other hazards
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>lithium sulfate</td>
<td>CAS-No.: 10377-48-7</td>
<td>10 – 20</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td>EC-No.: 233-820-4</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>Urease</td>
<td>CAS-No.: 9002-13-5</td>
<td>0,1 – 1</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>EC-No.: 232-656-0</td>
<td></td>
<td>Eye Irrit. 2, H319, Resp. Sens. 1, H334, STOT SE 3, H335</td>
</tr>
<tr>
<td>sodium azide substance with a Community workplace exposure limit</td>
<td>CAS-No.: 26628-22-8</td>
<td>&lt; 0,1</td>
<td>Acute Tox. 2 (Oral), H300</td>
</tr>
<tr>
<td></td>
<td>EC-No.: 247-852-1</td>
<td></td>
<td>Aquatic Acute 1, H400</td>
</tr>
<tr>
<td></td>
<td>EC Index-No.: 011-004-00-7</td>
<td></td>
<td>Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-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. 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

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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including 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
8.1.1 National occupational exposure and biological limit values

<table>
<thead>
<tr>
<th>sodium azide (26628-22-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU - Indicative Occupational Exposure Limit (IOEL)</td>
</tr>
<tr>
<td>Local name</td>
</tr>
<tr>
<td>IOEL TWA</td>
</tr>
<tr>
<td>IOEL STEL</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

sodium azide (26628-22-8)

<table>
<thead>
<tr>
<th>Remark</th>
<th>Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulatory reference</td>
<td>COMMISSION DIRECTIVE 2000/39/EC</td>
</tr>
</tbody>
</table>

8.1.2. Recommended monitoring procedures
No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls
Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

Eye protection

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Droplet</td>
<td>clear, With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Skin and body protection

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

Hand protection:
Protective gloves

Hand protection

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Penetration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber (NBR)</td>
<td>3 (&gt; 60 minutes)</td>
<td>2 (&lt; 1.5)</td>
<td>EN ISO 374</td>
<td></td>
</tr>
</tbody>
</table>

8.2.2.3. Respiratory protection

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.03.2022 (Revision date)  EN (English)  33/53

Respiratory protection

<table>
<thead>
<tr>
<th>Device</th>
<th>Filter type</th>
<th>Condition</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
<td>Protection for Liquid particles</td>
<td>EN 143, EN 149</td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards
No additional information available

8.2.3. Environmental exposure controls
Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>milky.</td>
</tr>
<tr>
<td>Odour</td>
<td>None.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>溶於水。不適用於n-octanol/water (Log Kow)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure at 50°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapour density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Lithium sulfate (10377-48-7)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>580 mg/kg rat</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - general</td>
<td>The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment, short-term.</td>
<td>Not classified</td>
</tr>
<tr>
<td>(acute)</td>
<td></td>
</tr>
<tr>
<td>Hazardous to the aquatic environment, long-term.</td>
<td>Not classified</td>
</tr>
<tr>
<td>(chronic)</td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Compound</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium sulfate (10377-48-7)</td>
<td>Biodegradability: Not applicable.</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.03.2022 (Revision date)

EN (English)

<table>
<thead>
<tr>
<th>Lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Lithium sulfate (10377-48-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

Overland transport
Not applicable
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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Air transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments
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

REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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:

<table>
<thead>
<tr>
<th>H- and EUH-statements</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 2 (Oral)</td>
<td>Acute toxicity (oral), Category 2</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>Hazardous to the aquatic environment – Acute Hazard, Category 1</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment – Chronic Hazard, Category 1</td>
</tr>
<tr>
<td>EUH032</td>
<td>Contact with acids liberates very toxic gas.</td>
</tr>
<tr>
<td>EUH208</td>
<td>Contains Urease. May produce an allergic reaction.</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed.</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 4)
Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H334</td>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life.</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects.</td>
</tr>
<tr>
<td>Resp. Sens. 1</td>
<td>Respiratory sensitisation, Category 1</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form     : Mixture
Product name     : L-Arginine/Urea/Ammonia Assay Kit (Bottle 5)
Product code     : K-LARGE (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
IE – A98 YV29 Bray – County Wicklow
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- and EUH-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
Contains                : 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 protective gloves/protective clothing/eye protection/face protection/hearing
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14.03.2022 (Revision date)
EN (English)

Labelling according to: exemption for inner packaging where the contents do not exceed 10ml
Hazard pictograms (CLP):

GHS08

Hazardous ingredients: imidazole

2.3. Other hazards
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>lithium sulfate</td>
<td>CAS-No.: 10377-48-7 EC-No.: 233-820-4</td>
<td>10 – 20</td>
<td>Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>imidazole</td>
<td>CAS-No.: 288-32-4 EC-No.: 206-019-2 EC Index-No.: 613-319-00-0</td>
<td>1 – 5</td>
<td>Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Rep. 1B, H360D</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-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

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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures: Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store locked up. 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

8.1.1 National occupational exposure and biological limit values  
No additional information available

8.1.2. Recommended monitoring procedures  
No additional information available

8.1.3. Air contaminants formed  
No additional information available

8.1.4. DNEL and PNEC  
No additional information available

8.1.5. Control banding  
No additional information available

#### 8.2. Exposure controls

8.2.1. Appropriate engineering controls  
**Appropriate engineering controls:**  
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment  
**Personal protective equipment symbol(s):**

#### 8.2.2.1. Eye and face protection  
**Eye protection:**
Safety glasses

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Droplet</td>
<td>clear, With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>

8.2.2.2. Skin protection  
**Skin and body protection:**  
Wear suitable protective clothing

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

**Hand protection:**  
Protective gloves

<table>
<thead>
<tr>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Penetration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber (NBR)</td>
<td>3 (&gt; 60 minutes)</td>
<td>2 (&lt; 1.5)</td>
<td></td>
<td>EN ISO 374</td>
</tr>
</tbody>
</table>
8.2.2.3. Respiratory protection

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

<table>
<thead>
<tr>
<th>Respiratory protection</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>Filter type</td>
<td>Condition</td>
<td>Standard</td>
</tr>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
<td>Protection for Liquid particles</td>
<td>EN 143, EN 149</td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards
No additional information available

8.2.3. Environmental exposure controls

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: milky.
- Odour: None.
- Odour threshold: Not available
- Melting point: Not applicable
- Freezing point: Not available
- Boiling point: Not available
- Flammability: Not applicable
- Lower explosion limit: Not available
- Upper explosion limit: Not available
- Flash point: Not available
- Auto-ignition temperature: Not available
- Decomposition temperature: Not available
- pH: Not available
- Viscosity, kinematic: Not available
- Solubility: Soluble in water.
- Partition coefficient n-octanol/water (Log Kow): Not available
- Vapour pressure: Not available
- Vapour pressure at 50°C: Not available
- Density: Not available
- Relative density: Not available
- Relative vapour density at 20°C: Not available
- Particle characteristics: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
No additional information available

---

**SECTION 10: Stability and reactivity**

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

10.2. Chemical stability
Stable under normal conditions.
10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

imidazole (288-32-4)

LD50 oral 960 mg/kg

Skin corrosion/irritation : Causes skin irritation.

lithium sulfate (10377-48-7)

pH 8 (4 %)

Serious eye damage/irritation : Causes serious eye irritation.

lithium sulfate (10377-48-7)

pH 8 (4 %)

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

11.2. Information on other hazards

No additional information available

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.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified
L-Arginine/Urea/Ammonia Assay Kit (Bottle 5)
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imidazole (288-32-4)
NOEC chronic algae 25 mg/l

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. Endocrine disrupting properties
No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
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14.5. Environmental hazards

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

No supplementary information available

14.6. Special precautions for user

Overland transport
Not applicable

Air transport
Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

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

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PIC Regulation (Prior Informed Consent)
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POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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:

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<th>Full text of H- and EUH-statements:</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Eye Irrit. 2</td>
</tr>
</tbody>
</table>
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<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H302</strong></td>
</tr>
<tr>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td><strong>H314</strong></td>
</tr>
<tr>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td><strong>H315</strong></td>
</tr>
<tr>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td><strong>H319</strong></td>
</tr>
<tr>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td><strong>H360</strong></td>
</tr>
<tr>
<td>May damage fertility or the unborn child.</td>
</tr>
<tr>
<td><strong>H360D</strong></td>
</tr>
<tr>
<td>May damage the unborn child.</td>
</tr>
<tr>
<td><strong>Repr. 1B</strong></td>
</tr>
<tr>
<td>Reproductive toxicity, Category 1B</td>
</tr>
<tr>
<td><strong>Skin Corr. 1C</strong></td>
</tr>
<tr>
<td>Skin corrosion/irritation, Category 1, Sub-Category 1C</td>
</tr>
</tbody>
</table>

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : L-Arginine/Urea/Ammonia Assay Kit (Bottle 6)
Product code : K-LARGE (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
IE– A98 Y29 Bray – County Wicklow
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

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0.1 %
### 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

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media


#### 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

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

Eye protection:
Safety glasses

<table>
<thead>
<tr>
<th>Type</th>
<th>Field of application</th>
<th>Characteristics</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety glasses</td>
<td>Droplet</td>
<td>clear; With side shields</td>
<td>EN 174</td>
</tr>
</tbody>
</table>

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing
L-Arginine/Urea/Ammonia Assay Kit (Bottle 6)

Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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### Skin and body protection

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab coat</td>
<td></td>
</tr>
</tbody>
</table>

### Hand protection:

Protective gloves

<table>
<thead>
<tr>
<th>Hand protection</th>
<th>Type</th>
<th>Material</th>
<th>Permeation</th>
<th>Thickness (mm)</th>
<th>Penetration</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable gloves</td>
<td>Nitrile rubber (NBR)</td>
<td>3 (&gt; 60 minutes)</td>
<td></td>
<td>2 (&lt; 1.5)</td>
<td>EN ISO 374</td>
<td></td>
</tr>
</tbody>
</table>

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

<table>
<thead>
<tr>
<th>Respiratory protection</th>
<th>Device</th>
<th>Filter type</th>
<th>Condition</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust mask</td>
<td>Type P1</td>
<td>Protection for Liquid particles</td>
<td>EN 143, EN 149</td>
<td></td>
</tr>
</tbody>
</table>

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless.</td>
</tr>
<tr>
<td>Odour</td>
<td>None.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure at 50°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative vapour density at 20°C</td>
<td>Not available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
L-Arginine/Urea/Ammonia Assay Kit (Bottle 6)
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9.2. Other information

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
No additional information available

SECTION 10: Stability and reactivity

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

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

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

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Acute toxicity (oral)</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

11.2. Information on other hazards
No additional information available

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Ecology - general</th>
<th>The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous to the aquatic environment, short- term (acute)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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Hazardous to the aquatic environment, long–term (chronic) : 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. Endocrine disrupting properties
No additional information available

12.7. 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 / IATA

<table>
<thead>
<tr>
<th>ADR</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number or ID number</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>No supplementary information available</td>
<td></td>
</tr>
</tbody>
</table>

14.6. Special precautions for user

Overland transport
Not applicable

Air transport
Not applicable
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14.7. Maritime transport in bulk according to IMO instruments
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
REACH Annex XVII (Restriction List)
Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic 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. |

Safety Data Sheet (SDS), EU

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