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

1.1. Product identifier

Product form: Mixture
Name: D-Glucuronic/D-Galacturonic Acid Assay Kit
K-URONIC Bottle 1

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

1.2.1. Relevant identified uses

Industrial/Professional use spec: For professional use only
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

Megazyme, Bray Business Park, Bray, Co. Wicklow, A98 YV29, Ireland.
T 1 286 1220 - F 1 286 1264
cs@megazyme.com - http://secure.megazyme.com

1.4. Emergency telephone number

Emergency number: +353-1-2861220

<table>
<thead>
<tr>
<th>Country</th>
<th>Official advisory body</th>
<th>Address</th>
<th>Emergency number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRELAND (REPUBLIC OF)</td>
<td>National Poisons Information Centre</td>
<td>Beaumont Hospital Beaumont Road Dublin 9</td>
<td>+353 1 8379964</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>National Poisons Information Service (Birmingham Centre)</td>
<td>Dudley Road Birmingham B18 7QH</td>
<td>0870 600 6266 (UK only)</td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Skin Irrit. 2  H315
Eye Dam. 1  H318
Repr. 2  H361
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

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

Signal word (CLP): Danger
Hazard pictograms (CLP): GHS05   GHS08
Hazardous ingredients: 1H-imidazole
Hazard statements (CLP): H315 - Causes skin irritation
                        H318 - Causes serious eye damage
                        H361 - Suspected of damaging fertility. Suspected of damaging the unborn child
Precautionary statements (CLP): P201 - Obtain special instructions before use
2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Directive 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1H-imidazole</td>
<td>(CAS No) 288-32-4</td>
<td>3-4</td>
<td>Xn: R22</td>
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<tr>
<td></td>
<td>(EC No) 206-019-2</td>
<td></td>
<td>C; R34</td>
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<tr>
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<td></td>
<td>Repr.Cat.3; R63</td>
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</tbody>
</table>

<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>1H-imidazole</td>
<td>(CAS No) 288-32-4</td>
<td>3-4</td>
<td>Repr. 2, H361d</td>
</tr>
<tr>
<td></td>
<td>(EC No) 206-019-2</td>
<td></td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1C, H314</td>
</tr>
</tbody>
</table>

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation: Ensure fresh air breathing. Allow the victim to rest. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTRE or doctor/physician.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor/physician.

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

Symptoms/injuries: Causes severe skin burns and eye damage. Suspected of damaging fertility. May damage the unborn child.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity: Thermal decomposition generates: Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe Vapours. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Comply with applicable regulations.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from direct sunlight. Keep container closed when not in use.

Incompatible materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Exposure controls

Personal protective equipment: Avoid all unnecessary exposure.

Hand protection: Wear protective gloves.

Eye protection: Chemical goggles or face shield.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: Wear appropriate mask.

Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Colour: Colourless

Odour: Characteristic

Odour threshold: No data available

pH: No data available

Relative evaporation rate (butylacetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: No data available

Flash point: No data available

Self ignition temperature: No data available
D-Glucuronic/D-Galacturonic Acid Assay Kit
K-URONIC Bottle 1
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20°C: No data available
Relative density: No data available
Solubility: No data available
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Thermal decomposition generates: Corrosive vapours.

10.2. Chemical stability
Not established.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong bases.

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified

1H-imidazole (288-32-4)

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>970 mg/kg rat</th>
</tr>
</thead>
</table>

Skin corrosion/irritation: Causes skin irritation. Causes severe skin burns and eye damage.

Serious eye damage/irritation: Causes serious eye damage. Causes severe skin burns and eye damage.

Respiratory or skin sensitisation: Not classified

Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Not classified

Based on available data, the classification criteria are not met.

Carcinogenicity: Not classified

Based on available data, the classification criteria are not met.

Reproductive toxicity: Suspected of damaging fertility. Suspected of damaging the unborn child.

Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure): Not classified

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure): Not classified

Based on available data, the classification criteria are not met.

Aspiration hazard: Not classified

Based on available data, the classification criteria are not met.
D-Glucuronic/D-Galacturonic Acid Assay Kit
K-URONIC Bottle 1
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Potential adverse human health effects and symptoms: Not classified
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

1H-imidazole (288-32-4)
LC50 fish 1 2259 mg/L (96 h; Pisces; QSAR)
EC50 Daphnia 1 341.5 mg/L (48 h; Daphnia magna)

12.2. Persistence and degradability

K-URONIC Bottle 1
Persistence and degradability: Not established.

1H-imidazole (288-32-4)
Persistence and degradability: Readily biodegradable in water.

12.3. Bioaccumulative potential

K-URONIC Bottle 1
Bioaccumulative potential: Not established.

1H-imidazole (288-32-4)
BCF fish 1 1 (Pimephales promelas; QSAR)
Log Pow -0.02
Bioaccumulative potential: Bioaccumulation unlikely.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other information: Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR/RID/ADNR/IMDG/ICAO/IATA

14.1. UN number

Not dangerous goods in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information: No supplementary information available

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
Contains no REACH candidate substance

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

Indication of changes:
Revision - See : *.


Other information : None.

Full text of R-, H- and EUH-phrases:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity, Category 2</td>
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<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity, Category 2</td>
</tr>
<tr>
<td>Skin Corr. 1C</td>
<td>Skin corrosion/irritation, Category 1C</td>
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<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</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>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H361d</td>
<td>Suspected of damaging the unborn child</td>
</tr>
<tr>
<td>R22</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>R34</td>
<td>Causes burns</td>
</tr>
<tr>
<td>R63</td>
<td>Possible risk of harm to the unborn child</td>
</tr>
<tr>
<td>C</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Xn</td>
<td>Harmful</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

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