SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006
MPLC Total Nucleic Acid Isolation Kit

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

1.1 Product identifier
Commercial Product Name : MPLC Total Nucleic Acid Isolation Kit
Mat.-No./ Genisys-No. : 03038505001

1.2 Relevant identified uses of the substance or mixture and uses advised against
Recommended restrictions on use : For professional users only.

1.3 Details of the supplier of the safety data sheet
Company : Roche Diagnostics Deutschland GmbH
- Sandhoferstrasse 116
  68305 Mannheim
E-mail address : mannheim.umweltschutz@roche.com
Telephone : +496217590
Telefax : +496217592890
Responsible Department : +49(0)621-759-2012+49(0)621-759-4848+49(0)8856-60-2629

1.4 Emergency telephone number
In case of emergencies: Central Works Security +49(0)621-759-2203
Roche Diagnostics GmbH
Centre for detoxification: Mainz +49(0)6131-19240
Munich +49(0)89-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H302 + H332 Harmful if swallowed or if inhaled
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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Version 1.7
Revision Date: 14.02.2015
Date of last issue: 31.07.2014
Date of first issue: 29.10.2012

2.3 Other hazards
See SECTION 3

SECTION 3: Composition/information on ingredients

Wash Buffer I (WB I) / Inhib. Removal Buffer

Classification (REGULATION (EC) No 1272/2008)
Flammable liquids, Category 3
Acute toxicity, Category 4
Skin irritation, Category 2
Eye irritation, Category 2

Classification (67/548/EEC, 1999/45/EC)
Flammable
Harmful
Irritant

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

MPLC Total Nucleic Acid Isolation Kit

<table>
<thead>
<tr>
<th>Number</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>50-01-1</td>
<td>200-002-3</td>
<td>Xn; R22 Xi; R36/38</td>
<td>Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td>F; R11</td>
<td>Flam. Liq. 2; H225</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

**Wash Buffer II (WB II)**

**Classification (REGULATION (EC) No 1272/2008)**
Flammable liquids, Category 3

**Classification (67/548/EEC, 1999/45/EC)**
Flammable

**Hazardous components**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td>F; R11</td>
<td>Flam. Liq. 2; H225</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

**Wash Buffer III**

**Classification (REGULATION (EC) No 1272/2008)**
Not a hazardous substance or mixture.

**Classification (67/548/EEC, 1999/45/EC)**
Not a hazardous substance or mixture.

**Hazardous components**

Remarks: No hazardous ingredients

**Lysis/Binding Buffer**

**Classification (REGULATION (EC) No 1272/2008)**
Acute toxicity, Category 4 H302: Harmful if swallowed.
Acute toxicity, Category 4 H332: Harmful if inhaled.
Serious eye damage, Category 1 H318: Causes serious eye damage.
Chronic aquatic toxicity, Category 3 H412: Harmful to aquatic life with long lasting effects.

**Classification (67/548/EEC, 1999/45/EC)**
Harmful R20/21/22: Harmful by inhalation, in contact with
skin and if swallowed.

Irritant

- R41: Risk of serious damage to eyes.
- R32: Contact with acids liberates very toxic gas.

Dangerous for the environment

- R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium thiocyanate</td>
<td>593-84-0 209-812-1</td>
<td>Xn; R20/21/22 R32 R52-R53</td>
<td>Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Aquatic Chronic 3; H412</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Triton X-100</td>
<td>9002-93-1</td>
<td>Xn; R22 Xi; R41</td>
<td>Acute Tox. 4; H302 Eye Dam. 1; H318</td>
<td>&gt;= 20 - &lt; 25</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

**Proteinase K**

**Classification (REGULATION (EC) No 1272/2008)**

- Skin irritation, Category 2 H315: Causes skin irritation.
- Eye irritation, Category 2 H319: Causes serious eye irritation.
- Respiratory sensitisation, Category 1 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.
- Specific target organ toxicity - single exposure, Category 3, Respiratory system H335: May cause respiratory irritation.

**Classification (67/548/EEC, 1999/45/EC)**

- Sensitising R42/43: May cause sensitisation by inhalation and skin contact.
- Irritant R36/37/38: Irritating to eyes, respiratory system and skin.

**Hazardous components**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proteinase, Tritirachium album serine</td>
<td>39450-01-6 254-457-8</td>
<td>Xi; R36/37/38 R42</td>
<td>Skin Irrit. 2; H315 Eye Irrit. 2; H319</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
</tbody>
</table>
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MPLC Total Nucleic Acid Isolation Kit

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Xi; Xi; R36/37/38
Xn; R42
Xi; R43
Resp. Sens. 1;
H334
Skin Sens. 1; H317
STOT SE 3; H335

For explanation of abbreviations see section 16.

**Magnetic Glass Particles Suspension**

**Classification (REGULATION (EC) No 1272/2008)**

Flammable liquids, Category 2
H225: Highly flammable liquid and vapour.

Eye irritation, Category 2
H319: Causes serious eye irritation.

Specific target organ toxicity - single exposure, Category 3, Central nervous system
H336: May cause drowsiness or dizziness.

**Classification (67/548/EEC, 1999/45/EC)**

Highly flammable
R11: Highly flammable.

Irritant
R36: Irritating to eyes.

R67: Vapours may cause drowsiness and dizziness.

**Hazardous components**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>F; R11; R36; R67</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
</tbody>
</table>

200-661-7

For explanation of abbreviations see section 16.

**Elution Buffer**

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Classification (67/548/EEC, 1999/45/EC)**

Not a hazardous substance or mixture.

**Hazardous components**

Remarks: No hazardous ingredients

---

**SECTION 4: First aid measures**

4.1 **Description of first aid measures**

General advice: Move out of dangerous area.
Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

If inhaled:
- Call a physician or poison control centre immediately.
- Move to fresh air.
- If unconscious place in recovery position and seek medical advice.

In case of skin contact:
- If skin irritation persists, call a physician.
- If on skin, rinse well with water.
- If on clothes, remove clothes.

In case of eye contact:
- Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Continue rinsing eyes during transport to hospital.
- Remove contact lenses.
- Protect unharmed eye.
- Keep eye wide open while rinsing.
- If eye irritation persists, consult a specialist.

If swallowed:
- Clean mouth with water and drink afterwards plenty of water.
- Keep respiratory tract clear.
- Do NOT induce vomiting.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.
- Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms:
- No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment:
- The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
- Alcohol-resistant foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media:
- High volume water jet

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
- Do not allow run-off from fire fighting to enter drains or water courses.
5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Refer to protective measures listed in sections 7 and 8. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Treat recovered material as described in the section “Disposal considerations”.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

Advice on protection against fire and explosion:

Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures:

When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions:

See label, package insert or internal guidelines

Storage class (TRGS 510):

3, Flammable liquids

Other data:

No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s):

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Wash Buffer I (WB I) / Inhib. Removal Buffer

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>AGW</td>
<td>500 ppm</td>
<td>DE TRGS 900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>960 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>2; (II)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further information:

Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child.
**Wash Buffer II (WB II)**

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>AGW</td>
<td>500 ppm</td>
<td>DE TRGS 900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>960 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>2;(II)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Further information**

Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child.

**Wash Buffer III**

Contains no substances with occupational exposure limit values.

**Lysis/Binding Buffer**

Contains no substances with occupational exposure limit values.

**Proteinase K**

Contains no substances with occupational exposure limit values.

**Magnetic Glass Particles Suspension**

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>AGW</td>
<td>200 ppm</td>
<td>DE TRGS 900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>500 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Peak-limit: excursion factor (category)</td>
<td>2;(II)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Further information**

Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission). When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child.

**Biological occupational exposure limits**

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Sampling time</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Acetone: 25 mg/l (Blood)</td>
<td>Immediately after exposition or after working hours</td>
<td>TRGS 903</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acetone: 25 mg/l (Urine)</td>
<td>Immediately after exposition or after working hours</td>
<td>TRGS 903</td>
</tr>
</tbody>
</table>

**Elution Buffer**
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection

Material : Protective gloves

Remarks : The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. This recommendation is only valid for the product mentioned in the safety data sheet and provided by us and for the application specified by us. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

*Wash Buffer I (WB I) / Inhib. Removal Buffer*

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6.6</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Lower explosion limit  : No data available
Vapour pressure  : 43 hPa
Relative vapour density  : No data available
Relative density  : No data available
Density  : No data available
Solubility(ies)
  Water solubility  : completely miscible
Partition coefficient: n-octanol/water  : No data available
Ignition temperature  : No data available
Auto-ignition temperature  : 425 °C
Decomposition temperature  : No data available
Viscosity  : No data available
Explosive properties  : No data available
Oxidizing properties  : The substance or mixture is not classified as oxidizing.

**Wash Buffer II (WB II)**

Appearance  : liquid
Colour  : colourless
Odour  : characteristic
Odour Threshold  : No data available
pH  : 7,4
Melting point/freezing point  : No data available
Initial boiling point and boiling range  : No data available
Flash point  : 25 °C
Evaporation rate  : No data available
Flammability (solid, gas)  : No data available
Upper explosion limit  : No data available
Lower explosion limit  : No data available
Vapour pressure  : 43 hPa
Relative vapour density  : No data available
Relative density  : No data available
Density  : No data available
Solubility(ies)
  Water solubility  : completely miscible
Partition coefficient: n-octanol/water  : No data available
Ignition temperature  : No data available
Auto-ignition temperature : 425 °C
Decomposition temperature : No data available
Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

**Wash Buffer III**

Appearance : liquid
Colour : colourless
Odour : none
Odour Threshold : No data available
pH : 4.0
Melting point/freezing point : No data available
Initial boiling point and boiling range : No data available
Flash point : No data available
Evaporation rate : No data available
Flammability (solid, gas) : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : No data available
Relative vapour density : No data available
Relative density : No data available
Density : No data available
Solubility(ies) : No data available
Partition coefficient: n-octanol/water : No data available
Ignition temperature : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

**Lysis/Binding Buffer**

Appearance : liquid
Colour : colourless
Odour : none
Odour Threshold: No data available
pH: 6.0 - 7.0

Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: No data available

Evaporation rate: No data available
Flammability (solid, gas): The product is not flammable, Does not sustain combustion.

Upper explosion limit: No data available
Lower explosion limit: No data available

Vapour pressure: No data available
Relative vapour density: No data available
Relative density: No data available
Density: No data available
Solubility(ies)
Water solubility: completely miscible

Partition coefficient: n-octanol/water: No data available
Ignition temperature: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available

Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: The substance or mixture is not classified as oxidizing.

**Proteinase K**

Appearance: solid
Colour: white
Odour: very faint
Odour Threshold: No data available
pH: 6.5 (as aqueous solution)

Melting point/range: No data available
Initial boiling point and boiling range: No data available
Flash point: does not flash

Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper explosion limit: No data available
Lower explosion limit: No data available
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Vapour pressure : No data available
Relative vapour density : No data available
Relative density : No data available
Density : No data available
Bulk density : ca. 35 kg/m3

Solubility(ies)
Water solubility : soluble

Partition coefficient: n-octanol/water : No data available
Ignition temperature : No data available
Auto-ignition temperature : No data available
Decomposition temperature : Decomposes on heating.

Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : No data available

**Magnetic Glass Particles Suspension**
Appearance : liquid
Colour : red brown
Odour : alcohol-like
Odour Threshold : No data available
pH : 7,0
Melting point/range : -89 °C
Boiling point/boiling range : 82 °C
Flash point : 12 °C
Evaporation rate : No data available
Flammability (solid, gas) : No data available
Upper explosion limit : No data available
Lower explosion limit : No data available
Vapour pressure : 42 hPa (20 °C)

Relative vapour density : No data available
Relative density : No data available
Density : No data available
Solubility(ies) : No data available
Partition coefficient: n-octanol/water : No data available
Ignition temperature : No data available
Auto-ignition temperature : 485 °C
Decomposition temperature : No data available

Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

### Elution Buffer

Appearance : liquid

Colour : colourless

Odour : none

Odour Threshold : No data available

pH : 8,0

Melting point/freezing point : No data available
Initial boiling point and boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : The product is not flammable., Does not sustain combustion.

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available
Relative vapour density : No data available
Relative density : No data available
Density : No data available

Solubility(ies)
  Water solubility : completely miscible

Partition coefficient: n-octanol/water : No data available

Ignition temperature : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available
Explosive properties : No data available
Oxidizing properties : The substance or mixture is not classified as oxidizing.

### 9.2 Other information

**Wash Buffer I (WB I) / Inhib.Removal Buffer**

No data available
**Wash Buffer II (WB II)**
No data available

**Wash Buffer III**
No data available

**Lysis/Binding Buffer**
No data available

**Proteinase K**
No data available

**Magnetic Glass Particles Suspension**
No data available

**Elution Buffer**
No data available

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity
No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability
Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Hazardous reactions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
<tr>
<td></td>
<td>Vapours may form explosive mixture with air.</td>
</tr>
</tbody>
</table>

### 10.4 Conditions to avoid

<table>
<thead>
<tr>
<th>Conditions to avoid</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heat, flames and sparks.</td>
</tr>
</tbody>
</table>

### 10.5 Incompatible materials

<table>
<thead>
<tr>
<th>Materials to avoid</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 10.6 Hazardous decomposition products
No data available
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Wash Buffer I (WB I) / Inhib. Removal Buffer

Acute toxicity
Harmful if swallowed.

Components:

*guanidinium chloride:*

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute inhalation toxicity</th>
<th>Acute dermal toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidinium chloride</td>
<td>LD50 Oral (Rat): 475 mg/kg</td>
<td>LC50 (Rat, female): 3.2 mg/l</td>
<td>LD50 Dermal (Rabbit): &gt; 2.001 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral (Mouse): 571 mg/kg</td>
<td>LC50 (Rat, male and female): 5.3 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50 Oral (Rat): 1.120 mg/kg</td>
<td>LC50 (Rat, male): 7.7 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

ethanol:

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute oral toxicity</th>
<th>Acute inhalation toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>LD50 (Rat): 7.000 mg/kg</td>
<td>LC50 (Rat): 20000 ppm</td>
</tr>
<tr>
<td></td>
<td>LD50 (Mouse): 3.450 mg/kg</td>
<td>LC50 (Mouse): 39 g/m3</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin irritation.

Components:

*guanidinium chloride:*
Species: Rabbit
Result: Irritating to skin.

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:

*guanidinium chloride:*
Species: Rabbit
Result: Irritating to eyes.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:
guanidinium chloride:
Assessment: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity
Not classified based on available information.

Components:
guanidinium chloride:
Germ cell mutagenicity: Assessment: Not mutagenic in Ames Test

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information
Wash Buffer II (WB II)

Acute toxicity
Not classified based on available information.

Components:
ethanol:
Acute oral toxicity: LD50 (Rat): 7.000 mg/kg
LD50 (Mouse): 3.450 mg/kg

Acute inhalation toxicity: LC50 (Rat): 20000 ppm
Exposure time: 10 h
LC50 (Mouse): 39 g/m3
Exposure time: 4 h

Skin corrosion/irritation
Not classified based on available information.
Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Wash Buffer III

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Lysis/Binding Buffer
### Acute toxicity
Harmful if swallowed or if inhaled

**Components:**

**guanidinium thiocyanate:**
- **Acute oral toxicity:** LD50 Oral (Rat): 593 mg/kg
- **Acute inhalation toxicity:** Acute toxicity estimate: 1,5 mg/l
  - Test atmosphere: dust/mist
  - Method: Expert judgement
- **Acute dermal toxicity:** Acute toxicity estimate: 1.100 mg/kg
  - Method: Expert judgement

**Triton X-100:**
- **Acute oral toxicity:** LD50 Oral (Rat): 1.900 - 5.000 mg/kg
- **Acute dermal toxicity:** LD50 Dermal (Rabbit): > 3.000 mg/kg

### Skin corrosion/irritation
Not classified based on available information.

### Serious eye damage/eye irritation
Causes serious eye damage.

**Components:**

**Triton X-100:**
- **Result:** Risk of serious damage to eyes.
- **Remarks:** May cause irreversible eye damage.

### Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

### Germ cell mutagenicity
Not classified based on available information.

### Carcinogenicity
Not classified based on available information.

**Components:**

**guanidinium thiocyanate:**
- **Remarks:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity
Not classified based on available information.

### STOT - single exposure
Not classified based on available information.

### STOT - repeated exposure
Not classified based on available information.
Aspiration toxicity
Not classified based on available information.

Proteinase K

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Causes skin irritation.

Components:
Proteinase, Tritirachium album serine:
Result: Irritating to skin.
Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:
Proteinase, Tritirachium album serine:
Result: Irritating to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation
Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:
Proteinase, Tritirachium album serine:
Assessment: May cause sensitisation by skin contact.
Remarks: Causes sensitisation.

Assessment: May cause sensitisation by inhalation.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
May cause respiratory irritation.

Components:
Proteinase, Tritirachium album serine:
Assessment: May cause respiratory irritation.

STOT - repeated exposure
Not classified based on available information.

Components:
Proteinase, Tritirachium album serine:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity
Not classified based on available information.

Components:
Proteinase, Tritirachium album serine:
No data available

Magnetic Glass Particles Suspension

Acute toxicity
Not classified based on available information.

Components:
propan-2-ol:
Acute oral toxicity: LD50 Oral (Rat): 4.570 mg/kg
LD50 Oral (Mouse): 3.600 mg/kg
LD50 Oral (Rabbit): 6.410 mg/kg
Acute inhalation toxicity: LC50 (Rat): 30 mg/l, 16000 ppm
Exposure time: 4 h
LC50 (Mouse): 53 mg/l
Acute dermal toxicity: LD50 Dermal (Rabbit): 13.400 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Components:
propan-2-ol:
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:
propan-2-ol:
Result: Irritating to eyes.
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.
Reproductive toxicity
Not classified based on available information.

STOT - single exposure
May cause drowsiness or dizziness.

Components:
propan-2-ol:
Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure
Not classified based on available information.

Components:
propan-2-ol:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity
Not classified based on available information.

Further information

Elution Buffer

Acute toxicity
Not classified based on available information.

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT - single exposure
Not classified based on available information.

STOT - repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.
SECTION 12: Ecological information

12.1 Toxicity

**Wash Buffer I (WB I) / Inhib. Removal Buffer**

**Components:**
- guanidinium chloride:
  - Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): 1.759 mg/l
    - Exposure time: 48 h
  - Toxicity to bacteria: EC50 (Pseudomonas putida): 89 mg/l
    - Exposure time: 18 h

Ecotoxicology Assessment
- Acute aquatic toxicity: This product has no known ecotoxicological effects.
- Chronic aquatic toxicity: This product has no known ecotoxicological effects.
- Toxicity Data on Soil: Not expected to adsorb on soil.
- Other organisms relevant to the environment: No data available

**ethanol:**
- Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): 8.000 mg/l
  - Exposure time: 48 h
- LC50 (Oncorhynchus mykiss (rainbow trout)): 7.100 mg/l
  - Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 5.400 mg/l
  - Exposure time: 48 h

Toxicity to algae: EC0 (Scenedesmus quadricauda (Green algae)): 5.000 mg/l
  - Exposure time: 7 d

Toxicity to bacteria: EC0 (Pseudomonas putida): 6.500 mg/l
  - Exposure time: 16 h

Ecotoxicology Assessment
- Toxicity Data on Soil: Not expected to adsorb on soil.
- Other organisms relevant to the environment: No data available

**Wash Buffer II (WB II)**

**Components:**
- ethanol:
  - Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): 8.000 mg/l
    - Exposure time: 48 h
  - LC50 (Oncorhynchus mykiss (rainbow trout)): 7.100 mg/l
    - Method: OECD Test Guideline 203
Ecotoxicology Assessment

**Toxicity to fish**

- **LC50** (Poecilia reticulata (guppy)): 89.1 mg/l
  - Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**

- **EC50** (Daphnia (water flea)): 42.4 mg/l
  - Exposure time: 48 h

**Ecotoxicology Assessment**

- Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

**Toxicity Data on Soil**

- Not expected to adsorb on soil.

**Other organisms relevant to the environment**

- No data available

---

**Triton X-100:**

**Toxicity to fish**

- **LC50** (Pimephales promelas (fathead minnow)): 4 - 8.9 mg/l
  - Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**

- **EC50** (Daphnia magna (Water flea)): 18 - 26 mg/l
  - Exposure time: 48 h

**Ecotoxicology Assessment**

- Acute aquatic toxicity: This product has no known ecotoxicological effects.
- Chronic aquatic toxicity: This product has no known ecotoxicological effects.

**Toxicity Data on Soil**

- Not expected to adsorb on soil.

**Other organisms relevant to the environment**

- No data available

---

**Proteinase K**
**Components:**

**Proteinase, Tritirachium album serine:**
Ecotoxicology Assessment
Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

### Magnetic Glass Particles Suspension

**Components:**
propan-2-ol:

Toxicity to fish: LC0 (Oncorhynchus mykiss (rainbow trout)): 10.000 mg/l
Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): 12.250 mg/l
Method: OECD Test Guideline 203

LC100 (Oncorhynchus mykiss (rainbow trout)): 15.000 mg/l
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 9.500 mg/l
Exposure time: 24 h

Toxicity to algae: EC0 (Scenedesmus quadricauda (Green algae)): 1.800 mg/l
Exposure time: 168 h
Method: OECD Test Guideline 201

Toxicity to bacteria: EC0 (Pseudomonas putida): 1.050 mg/l
Exposure time: 16 h

Ecotoxicology Assessment
Toxicity Data on Soil: Not expected to adsorb on soil.

Other organisms relevant to the environment: No data available

### Elution Buffer

No data available

---

### 12.2 Persistence and degradability

**Wash Buffer I (WB I) / Inhib. Removal Buffer**

**Components:**
guanidinium chloride:

Biodegradability: Biodegradation: < 70 %
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Impact on Sewage Treatment: Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

**Wash Buffer II (WB II)**
No data available

**Wash Buffer III**

No data available

**Lysis/Binding Buffer**

**Components:**
Triton X-100:
Biodegradability: Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

**Proteinase K**

No data available

**Magnetic Glass Particles Suspension**

**Components:**
propan-2-ol:
Biodegradability: Biodegradation: 99 %
Exposure time: 11 d
Method: OECD Test Guideline 302

Biodegradation: 57 %
Exposure time: 5 d
Method: OECD Test Guideline 302

**Elution Buffer**

No data available

12.3 Bioaccumulative potential

**Wash Buffer I (WB I) / Inhib. Removal Buffer**

**Components:**
guanidinium chloride:
Partition coefficient: n-octanol/water: log Pow: ca. -1.7 (20 °C)

**Wash Buffer II (WB II)**

No data available

**Wash Buffer III**

No data available

**Lysis/Binding Buffer**

**Components:**
guanidinium thiocyanate:
Partition coefficient: n-octanol/water: log Pow: -1.38

**Triton X-100:**
Bioaccumulation: Remarks: No bioaccumulation is to be expected (log Pow <= 4).
Proteinase K

No data available

Magnetic Glass Particles Suspension

Components:
propan-2-ol:
Partition coefficient: n-octanol/water : log Pow: 0.05

Elution Buffer

No data available

12.4 Mobility in soil

Wash Buffer I (WB I) / Inhib. Removal Buffer

No data available

Wash Buffer II (WB II)

No data available

Wash Buffer III

No data available

Lysis/Binding Buffer

No data available

Proteinase K

No data available

Magnetic Glass Particles Suspension

No data available

Elution Buffer

No data available

12.5 Results of PBT and vPvB assessment

Wash Buffer I (WB I) / Inhib. Removal Buffer

Not relevant

Wash Buffer II (WB II)

Not relevant

Wash Buffer III

Not relevant

Lysis/Binding Buffer

Not relevant

Proteinase K

Not relevant

Magnetic Glass Particles Suspension

Not relevant

Elution Buffer

Not relevant
12.6 Other adverse effects

**Wash Buffer I (WB I) / Inhib. Removal Buffer**
No data available

**Wash Buffer II (WB II)**
No data available

**Wash Buffer III**
No data available

**Lysis/Binding Buffer**
No data available

**Proteinase K**
No data available

**Magnetic Glass Particles Suspension**
No data available

**Elution Buffer**
No data available

---

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

**Product**
- The product should not be allowed to enter drains, water courses or the soil.
- Do not contaminate ponds, waterways or ditches with chemical or used container.
- Send to a licensed waste management company.

**Contaminated packaging**
- Empty remaining contents.
- Dispose of as unused product.
- Do not re-use empty containers.
- Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14: Transport information

#### 14.1 UN number

- **ADR** : UN 3316
- **IMDG** : UN 3316
- **IATA** : UN 3316

#### 14.2 UN proper shipping name

- **ADR** : Chemical kit
- **IMDG** : Chemical kit
- **IATA** : Chemical kit

#### 14.3 Transport hazard class(es)
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

MPLC Total Nucleic Acid Isolation Kit

Version 1.7
Revision Date: 14.02.2015
Date of last issue: 31.07.2014
Date of first issue: 29.10.2012

ADR : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR
Packing group : II
Classification Code : M11
Labels : 9
Tunnel restriction code : E

IMDG
Packing group : II
Labels : 9
EmS Code : F-A, S-P

IATA
Packing instruction (cargo aircraft) : 960
Packing instruction (passenger aircraft) : 960
Packing instruction (LQ) : Y960
Packing group : II
Labels : Miscellaneous dangerous goods

14.5 Environmental hazards

ADR
Environmentally hazardous : no

IMDG
Marine pollutant : no

14.6 Special precautions for user

Remarks : No data available

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

Remarks : Not applicable

SECTION 15: Regulatory information

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


<table>
<thead>
<tr>
<th>Substance</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>7b</td>
<td>Highly flammable</td>
<td>5.000 t</td>
</tr>
</tbody>
</table>


P5c

<table>
<thead>
<tr>
<th>Substance</th>
<th>Quantity 1</th>
<th>Quantity 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water contaminating class (Germany)</td>
<td>FLAMMABLE LIQUIDS</td>
<td>5.000 t</td>
</tr>
</tbody>
</table>

Remarks : Not applicable
Wash Buffer I (WB I) / Inhib. Removal Buffer

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:
- Warning

Signal word: Warning

Hazard statements:
- H226 Flammable liquid and vapour.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Precautionary statements:
**Prevention:**
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P280 Wear protective gloves/ eye protection/ face protection.

**Response:**
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**
- P403 + P235 Store in a well-ventilated place. Keep cool.

Hazardous components which must be listed on the label:
- 50-01-1 guanidinium chloride

Wash Buffer II (WB II)

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:
- Warning

Signal word: Warning

Hazard statements:
- H226 Flammable liquid and vapour.

Precautionary statements:
**Prevention:**
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

MPLC Total Nucleic Acid Isolation Kit

Version 1.7
Revision Date: 14.02.2015
Date of last issue: 31.07.2014
Date of first issue: 29.10.2012

P233
Response:
P303 + P361 + P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378  In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
P403 + P235
Disposal:
P501

Keep container tightly closed.

Response:
P303 + P361 + P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370 + P378  In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Store in a well-ventilated place. Keep cool.

Dispose of contents/ container to an approved waste disposal plant.

---

Wash Buffer III

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

Lysis/Binding Buffer

Labelling (REGULATION (EC) No 1272/2008)

Signal word : Danger

Hazard statements :
H302 + H332  Harmful if swallowed or if inhaled
H318  Causes serious eye damage.
H412  Harmful to aquatic life with long lasting effects.

Supplemental Hazard Statements :
EUH032  Contact with acids liberates very toxic gas.

Precautionary statements :
Prevention:
P261  Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273  Avoid release to the environment.
P280  Wear eye protection/ face protection.
Response:
P304 + P340 + P312  IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 + P310  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Disposal:
P501  Dispose of contents/ container to an ap-
Hazardous components which must be listed on the label:

- 593-84-0 guanidinium thiocyanate
- 9002-93-1 Triton X-100

**Proteinase K**

**Labelling (REGULATION (EC) No 1272/2008)**

**Hazard pictograms:**

- Danger

**Signal word:** Danger

**Hazard statements:**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.

**Precautionary statements**

- **Prevention:**
  - P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
  - P280 Wear eye protection/ face protection.
  - P280 Wear protective gloves.
  - P284 Wear respiratory protection.

- **Response:**
  - P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
  - P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

Hazardous components which must be listed on the label:

- 39450-01-6 Proteinase, Tritirachium album serine

**Magnetic Glass Particles Suspension**

**Labelling (REGULATION (EC) No 1272/2008)**

**Hazard pictograms:**

- Danger

**Signal word:** Danger

**Hazard statements:**

- H225 Highly flammable liquid and vapour.
- H319 Causes serious eye irritation.
Precautionary statements:

**Prevention:**
- P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233: Keep container tightly closed.
- P261: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P280: Wear protective gloves/ eye protection/ face protection.

**Response:**
- P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:
- 67-63-0 propan-2-ol

**Elution Buffer**

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

**15.2 Chemical Safety Assessment**
A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

**SECTION 16: Other information**

**Full text of R-Phrases**

- R11: Highly flammable.
- R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
- R22: Harmful if swallowed.
- R32: Contact with acids liberates very toxic gas.
- R36: Irritating to eyes.
- R36/37/38: Irritating to eyes, respiratory system and skin.
- R36/38: Irritating to eyes and skin.
- R41: Risk of serious damage to eyes.
- R42: May cause sensitisation by inhalation.
- R43: May cause sensitisation by skin contact.
- R52: Harmful to aquatic organisms.
- R53: May cause long-term adverse effects in the aquatic environment.
- R67: Vapours may cause drowsiness and dizziness.

**Full text of H-Statements**

- H225: Highly flammable liquid and vapour.
- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 : May cause respiratory irritation.
H336 : May cause drowsiness or dizziness.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Resp. Sens. : Respiratory sensitisation
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure

Further information

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