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

- 1.1 Product identifier
  - Trade name: Lysate in RIPA Buffer
  - Article number: VLY001, VLY002, VLY003, VLY004, VLY005, VLY006, VLY007, VLY008, VLY009, VLY010, VLY011

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
  - No further relevant information available.

- 1.3 Application of the substance / the mixture
  - Laboratory chemicals

- 1.4 Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Bio-Rad
    Endeavour House
    The Langford Business Park
    Kidlington
    OX5 1GE
    Tel: +44 (0)1865 852700
    Fax: +44 (0)1865 373899
    Web: www.bio-rad-antibodies.com
  - Information department:
    Technical services, customer support.
    antibody_safetydatasheets@bio-rad.com
  - 1.4 Emergency telephone number: +44 (0)1865852733 (9:00 - 17:00 GMT/BST Monday-Friday)

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
  - Classification according to Regulation (EC) No 1272/2008
    Acute Tox. 4 H302 Harmful if swallowed.
    Skin Irrit. 2 H315 Causes skin irritation.
    Eye Dam. 1 H318 Causes serious eye damage.
    STOT SE 3 H335 May cause respiratory irritation.
  - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC: not applicable

- Information concerning particular hazards for human and environment:
  - The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- Classification system:
  - The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- 2.2 Label elements
  - Labelling according to Regulation (EC) No 1272/2008
    The product is classified and labelled according to the CLP regulation.
Trade name: Lysate in RIPA Buffer

Hazard pictograms

GHS05  GHS07

Signal word Danger

Hazard-determining components of labelling:
Nonyl phenoxy poly (ethylene oxy) ethanol
sodium deoxycholate
sodium fluoride
sodium dodecyl sulphate

Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 9016-45-9</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonyl phenoxy poly (ethylene oxy) ethanol</td>
<td>Xn R22, Xi R37/38-41, Eye Dam. 1, H318, Acute Tox. 4, H302, Skin Irrit. 2, H315, STOT SE 3, H335</td>
<td>20-35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 7647-14-5</th>
<th>EINECS: 231-598-3</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium chloride</td>
<td>Xn R36/38, Skin Irrit. 2, H315, Eye Irrit. 2, H319</td>
<td>20-35%</td>
<td></td>
</tr>
</tbody>
</table>
Trade name: Lysate in RIPA Buffer

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS</th>
<th>EINECS</th>
<th>Concentration</th>
<th>Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium deoxycholate</td>
<td>7681-49-4</td>
<td>231-667-8</td>
<td>10-20%</td>
<td>Xn R22, Acute Tox. 4, H302</td>
</tr>
<tr>
<td>sodium fluoride</td>
<td>151-21-3</td>
<td>205-788-1</td>
<td>5-10%</td>
<td>T R25, Xi R36/38, Acute Tox. 3, H301, Skin Irrit. 2, H315; Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>sodium dodecyl sulphate</td>
<td>26628-22-8</td>
<td>247-852-1</td>
<td>1.0-2.5%</td>
<td>Xn R21/22, Xi R36/38, Acute Tox. 3, H311, Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>sodium azide</td>
<td></td>
<td></td>
<td>0.1-1.0%</td>
<td>T+ R28, N R50/53, Acute Tox. 2, H300, Aquatic Acute 1, H400; Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.

After skin contact
Immediately wash with water and soap and rinse thoroughly.

After eye contact
Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing
Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
No further relevant information available.

5.3 Advice for firefighters

Protective equipment: Wear self-contained respiratory protective device.
SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2 Environmental precautions:**
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- **6.4 Reference to other sections**
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Prevent formation of dust.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and receptacles:** According to product specification
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:** Keep receptacle tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    - **7681-49-4 sodium fluoride**
      - WEL Long-term value: 2.5 mg/m³ as F
    - **26628-22-8 sodium azide**
      - WEL Short-term value: 0.3 mg/m³
      - Long-term value: 0.1 mg/m³ (as NaN₃), Sk
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Avoid contact with the skin.
  Avoid contact with the eyes and skin.
**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Solid.
    - Colour: White
    - Odour: Odourless
  - **Odour threshold:** Not determined.
  - **pH-value at 20 °C:** 7.4
  - **Change in condition**
    - Melting point/Melting range: Undetermined
    - Boiling point/Boiling range: Undetermined
  - **Flash point:** Not applicable
  - **Flammability (solid, gaseous)** Not determined.
  - **Ignition temperature:**
    - Decomposition temperature: Not determined.
    - Self igniting: Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapour pressure:** Not applicable.
  - **Density:** Not determined
  - **Relative density** Not determined.
  - **Vapour density** Not applicable.
  - **Evaporation rate** Not applicable.
  - **Solubility in / Miscibility with**
    - Water: Insoluble
  - **Partition coefficient (n-octanol/water):** Not determined.
### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
  This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
  This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity**
    Harmful if swallowed.
  - **LD/LC50 values that are relevant for classification:**
    **1185-53-1 Tris-HCl**
    - **Oral LD50:** 5900 mg/kg (rat)

- **Primary irritant effect:**
  - **Skin corrosion/irritation**
    Causes skin irritation.
  - **Serious eye damage/irritation**
    Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
  May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
Trade name: Lysate in RIPA Buffer

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

SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Harmful to aquatic organisms
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation
  Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number
  - ADR, ADN, IMDG, IATA Void
- 14.2 UN proper shipping name
  - ADR, ADN, IMDG, IATA Void
- 14.3 Transport hazard class(es)
  - ADR, ADN, IMDG, IATA
    - Class Void
- 14.4 Packing group
  - ADR, IMDG, IATA Void
- 14.5 Environmental hazards:
  - Marine pollutant: No
- 14.6 Special precautions for user
  Not applicable.
Trade name: Lysate in RIPA Buffer

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.

National regulations
- Technical instructions (air):

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>5-10</td>
</tr>
</tbody>
</table>

- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- R21/22 Harmful in contact with skin and if swallowed.
- R22 Harmful if swallowed.
- R25 Toxic if swallowed.
- R28 Very toxic if swallowed.
- R32 Contact with acids liberates very toxic gas.
- R36/38 Irritating to eyes and skin.
- R37/38 Irritating to respiratory system and skin.
- R41 Risk of serious damage to eyes.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Department issuing SDS: Environmental Health and Safety.
Contact:
(Contd. on page 9)
Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- SVHC: Substances of Very High Concern
- Acute Tox. 2: Acute toxicity, Hazard Category 2
- Acute Tox. 3: Acute toxicity, Hazard Category 3
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

* Data compared to the previous version altered.