SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

   Product name: NZYGelpure
   Catalogue reference(s): MB01101, 50 columns;
   2 x 30 mL Binding Buffer
   1 x 12 mL Wash Buffer
   1 x 15 mL Elution Buffer
   MB01102, 200 columns;
   2 x 120 mL Binding Buffer
   2 x 25 mL Wash buffer
   1 x 60 mL Elution Buffer
   MB01103, 5 x 200 columns
   MB01104, 2 x 50 columns

   Brand: NZYTech
   REACH number: not applicable

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

   Identified uses: use as laboratory reagent; industrial (for professional use only)
   Uses advised against: no additional information available

1.3. Details of the supplier of the safety data sheet

   NZYTech, Lda., Estrada do Paço do Lumiar, Campus do Lumiar, 22, Edifício E, R/C, 1649-038 Lisboa, Portugal
   Tel. +351 213643514, Fax +351 217151168, info@nzytech.com

1.4. Emergency telephone number

   Call your regional Poisons Information Service or call local Life Saving Service

SECTION 2. HAZARDS IDENTIFICATION

   Classification of the complete product
   Classification according to Regulation (EC) No. 1272/2008 [CLP]

   H302: Acute Toxicity, oral (Category 4)
   H412: Hazardous to the aquatic environment – chronic (Category 3)
   EUH031: Contact with acids liberates toxic gas

![GHS07]

   Signal words
   Warning

   Classification according to Directive 67/548/EEC or 1999/45/EC
   Xn; R20/21/22-32-52/53
   Full text of R-phrases: see section 16
2.1. Classification of the substance or mixture

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

**Binding Buffer**

**Pictograms**

![GHS07](image)

**Signal word** – Warning

**Hazard statements**

- H302: Acute Tox., oral (Category 4)
- H412: Hazardous to the aquatic environment - chronic (Category 3)
- EUH031: Contact with acids liberates toxic gas

**Other components**

- GHS Pictograms - do not need labelling as hazardous
- Signal word - do not need labelling as hazardous
- Hazard statements - no hazard statements

2.1.2. Classification according to Directive 67/548/EEC or 1999/45/EC

**Binding Buffer**

Xn; R20/21/22-32-52/53

**Other components**

Do not need labelling as hazardous

2.1.3 Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

According 1999/45/EC small amounts of harmful and highly flammable preparations/mixtures have partly/completely exemption from labelling (no symbols F, O, Xn, Xi, N and no R and S phrases are necessary) until 25-125 mL|g.

According CLP (GHS) inner packages must be only labelled with symbol(s) and product identificator.

Harmful chemicals/mixtures with signal word: WARNING and highly flammable chemicals/mixtures must not be labelled with H and P phrases until 125 mL or 125 g.

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

**Binding Buffer**

**Pictograms**

![GHS07](image)
Signal words - Warning
H302: Harmful if swallowed.
H412: Harmful to aquatic life with long lasting effects.
EUH031: Contact with acids liberates toxic gas.

P260D: Do not breathe vapours; P273: Avoid release to the environment; P301+312: IF SWALLOWED: Call a POISON CENTER/doctor/.../ if you feel unwell; P330: Rinse mouth

Other components

GHS Pictograms - do not need labelling as hazardous
Signal word - do not need labelling as hazardous
Hazard statements - no hazard statements

2.2.2 Labelling according to Directive 67/548/EEC or 1999/45/EC

Binding Buffer

Xn,
Risk phrases: R 20/21/22-32-52/53
Harmful by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases: S 13-61
Keep away from food, drink and animal feedingstuffs. Avoid release to the environment. Refer to special instructions/Safety data sheets

Other components
Do not need labelling as hazardous

2.3. Other hazards

Information pertaining to particular Risks to Human and possible Symptoms
Cause after oral intake, impairments of health when ingested in small quantities.

Information pertaining to particular Risks to the Environment
Avoid contact of substance/mixture to environment. Harmful to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances or 3.2. Mixtures

Binding Buffer

Chemical: guanidinium thiocyanate
Concentration: 30 - 60 %
Formula: C₂H₆N₄S
Pseudonym: guanidine rhodanide
EC No.: 209-812-1
acc. 1999/45/EC: R20/21/22-32-52/53
acc. CLP (GHS): H302,H412, EUH031

Other components
The other components do not contain more than 1% of a component classified as hazardous and do not contain more than 0.1% of a component classified as carcinogenic.
SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

First-aid measures after inhalation of vapours: After inhalation of foam or vapour fresh air should be inhaled. Keep airways free.

First-aid measures after skin contact: Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. If possible use soap.

First-aid measures after eye contact: After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

First-aid measures after ingestion: After oral intake lots of water with activated charcoal supplement should be drunk after it has been ingested.

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

No data available

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

No additional information available

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Use water spray, dry powder, carbon dioxide

Unsuitable extinguishing media: none

5.2. Special hazards arising from the substance or mixture

Formation of hazardous and caustic vapour-air mixtures possible. Danger for environment only in the event of a large-scale leakage or formation of hazardous substances.

5.3. Advice for firefighters

No, for listed product. Product package burns like paper or plastic. Spray any vapours released with water. Retent fire water. Use only acid-resistant safety equipment. For great amount, if necessary, protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4. Further information

No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Wear suitable protective gloves (see 8.2). Regular staff training is necessary.

6.2. Environmental precautions

No data available

6.3. Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Collect small amounts of leaked liquid and flush with water into drains.

6.4. Reference to other sections

For disposal see section 13

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling in accordance with the test instruction that comes with the product.

7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature.
7.3. Specific end use(s)
no data available

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Binding Buffer
Chemical: guanidinium thiocyanate
CAS No.: 593-84-0
NIOSH: not listed
OSHA: not listed

Other components
No additional information available

8.2. Exposure controls
Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Engineering measures: Ensure there is exhaust ventilation of the area.
Eye/face protection: Safety glasses. Ensure eye bath is to hand.
Hand protection: Protective gloves.
Respiratory protection: Only if additional recommendations in test instruction or packing insert.
Skin protection: Protective clothing.
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

Binding Buffer
Color: orange  Odor: characteristic odor  Appearance: liquid
pH: 5-6.5
Specific gravity: 1.12 g/cm³

Wash Buffer
Color: colourless  Odor: odorless  Appearance: liquid
pH: 7-8
Specific gravity: 1.0 g/cm³

Elution Buffer
Color: colourless  Odor: odorless  Appearance: liquid
pH: 8-9
Specific gravity: 1.0 g/cm³

9.2. Other information
No data available

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity
No data available.

10.2. Chemical stability
No data available.

10.3. Possibility of hazardous reactions
No data available. Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas

10.4. Conditions to avoid
Not necessary. Only if on label. When indicated in packing insert.

10.5. Incompatible materials
Avoid contact with strong acids or alkalines.

10.6. Hazardous decomposition products
In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
(EN L 133/42 Official Journal of the European Union 31-05-2010)
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

**Binding Buffer**

<table>
<thead>
<tr>
<th>Chemical: guanidinium thiocyanate</th>
<th>CAS No.: 593-84-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat: 593 mg/kg</td>
<td></td>
</tr>
<tr>
<td>LC50 demi rat: 2000 mg/m³</td>
<td></td>
</tr>
<tr>
<td>LC50 inhal rat: 5.319 4h mg/L</td>
<td></td>
</tr>
<tr>
<td>LD50 ip rat: 300 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

**Other components**
Not classified. No declaration necessary, based on available data

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity
Following information is valid for pure substances.

**Binding Buffer**

<table>
<thead>
<tr>
<th>Chemical: guanidinium thiocyanate</th>
<th>CAS No.: 593-84-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGK (DE): 3</td>
<td></td>
</tr>
<tr>
<td>Storage class (VCJ): 12</td>
<td></td>
</tr>
</tbody>
</table>

**Other components**
Not classified. No declaration necessary, based on available data

12.2. Persistance and degradability
No data available

12.3. Bioaccumulative potential
No data available

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
No data available

12.6. Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods

**General:** Do not collect in acidic waste. May form toxic gases. Dispose in a safe manner in accordance with local/national regulations. Normally it is possible to empty small amounts diluted into drains.

### SECTION 14. TRANSPORT INFORMATION

(in accordance with ADR, RID, ADNR, IMDG, ICAO and IATA)

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Non Hazardous

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

No supplementary information available

14.6. Special precautions for user

**Overland transport:** no additional information available

**Transport by sea:** no additional information available

**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

**EU regulations:** no REACH Annex XVII restrictions; contains no REACH candidate substance

**National regulations:** no additional information available

15.2. Chemical safety assessment

No chemical safety assessment

### SECTION 16. OTHER INFORMATION

**Precautions:** the information and recommendations contained herein are to the best of our knowledge reliable. However, nothing herein is to be construed as a warranty or representation in respect of safety in use, suitability efficiency or otherwise, including freedom from patent infringements. Users should make their own tests for their particular purpose.

**Disclaimer:** NZYTech cannot accept any liability for any loss, damage or infringement arising from the use of the information or recommendations contained herein.

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

- **R20/21/22** Harmful by inhalation, in contact with skin and if swallowed.
- **R32** Contact with acids liberates very toxic gas.
- **R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **H302** Harmful if swallowed.
- **H412** Harmful to aquatic life with long lasting effects.
- **EUH031** Contact with acids liberates toxic gas.

**Document history:** Version 1410: 10/10/2014, Document creation

**Version 1511:** 30/11/2015, Major Revision