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

1.1 Product identifier

Product form: Mixture
Product name: 5 - 125 mL Lysis Buffer PA1
Cat. No.: BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0 The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

5 - 125 mL Lysis Buffer PA1

Directive 1999/45/EC
Symbols: do not need labelling as hazardous

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -

No hazard class

2.2 Label elements

5 - 125 mL Lysis Buffer PA1

Directive 1999/45/EC
Symbols: -

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -
2.3 Other hazards

Possible Hazards from physicochemical Properties
According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit.

An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms
---

Information pertaining to particular Risks to the Environment
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

5 - 125 mL Lysis Buffer PA1
Chemical: sodium chloride
Concentration: 5 - 10 %
Formula: NaCl
Pseudonym: salt
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
RTECS: VZ4725000
TSCA Inventory: listed
KE No.: KE-31387
acc. 1999/45/EC: -
acc. CLP (GHS): not necessary

3.3 Remarks
---

SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact
Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of Vapours
Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust.

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
None.
5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information
---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Not necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Clean working area with water. Flush used water into drains.

6.4 Reference to other sections
---

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
The original product package allows a safe storage.
Storage class (VCI): 12
WGK (DE): 1

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
5 - 125 mL Lysis Buffer PA1
Chemical: sodium chloride  CAS No.: 7647-14-5

8.2 Exposure controls
Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory Protection
Not necessary.

8.2.2 Hand Protection
Not necessary.

8.2.3 Eye Protection
Not necessary.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
5 - 125 mL Lysis Buffer PA1
Appearance: liquid  Color: colourless  Odor: odorless
pH: 7.5-8.5
Specific gravity: 1.06 g/cm³
9.2 Other information

Relevant Properties of Substance Group

---

9.2.1

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

---

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Or when indicated in packing insert.

10.5 Incompatible materials

Not necessary.

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

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

5 - 125 mL Lysis Buffer PA1

Chemical: sodium chloride

TSCA Inventory: listed

Korea Exist.Chem.Inventory: KE-31387

LD50oral rat : 3000 mg/kg

LD50oral rbt : 10 g/kg

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

5 - 125 mL Lysis Buffer PA1

Chemical: sodium chloride

CAS No.: 7647-14-5

WGK (DE): 1

Storage class (VCI): 12-13

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects
SECTION 13: Disposal considerations
Not necessary.

13.1 Waste treatment methods
GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary

14.6 Special precautions for user
not necessary

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

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases

16.1.2 List of relevant H phrases

16.1.3 List of relevant P phrases

16.2 Training Advice
Regular safety training.

16.3 Recommended Restriction on Use
None

16.4 Further Information

Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA.CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product form: Mixture
Product name: 4 - 100 mL Lysis Buffer PA2
Cat. No.: BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.
Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 76 11 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

4 - 100 mL Lysis Buffer PA2

Directive 1999/45/EC
Symbols: do not need labelling as hazardous

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -

No hazard class

2.2 Label elements

4 - 100 mL Lysis Buffer PA2

Directive 1999/45/EC
Symbols:
-

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -
2.3 Other hazards

Possible Hazards from Physicochemical Properties

According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit.

An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms

---

Information pertaining to particular Risks to the Environment

---

Other Hazards

---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

4 - 100 mL Lysis Buffer PA2

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<th>Chemical</th>
<th>Concentration</th>
<th>Formula</th>
<th>Pseudonym</th>
</tr>
</thead>
<tbody>
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<td>dodecyl sulfate, sodium salt</td>
<td>1 - 2.5 %</td>
<td>C₁₂H₂₅NaO₄S</td>
<td>sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt</td>
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<td></td>
<td>00036175</td>
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</tr>
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<td></td>
<td></td>
<td></td>
<td>acc. 1999/45/EC: -</td>
</tr>
</tbody>
</table>

3.3 Remarks

---

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact

Not necessary.

4.1.2 After EYE Contact

Not necessary.

4.1.3 After INHALATION of Vapours

Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
None.

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information
---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Not necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Clean working area with water. Flush used water into drains.

6.4 Reference to other sections
---

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
The original product package allows a safe storage.
Storage class (VCI): 12
WGK (DE): 2

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>4 - 100 mL Lysis Buffer PA2</th>
<th>Chemical:</th>
<th>dodecyl sulfate, sodium salt</th>
<th>CAS No.: 151-21-3</th>
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<td>OSHA:</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Chemical:</td>
<td>sodium chloride</td>
<td>CAS No.: 7647-14-5</td>
</tr>
<tr>
<td></td>
<td>Chemical:</td>
<td>chemicals/mixture &lt; 2%, not hazardous</td>
<td>CAS No.: -</td>
</tr>
</tbody>
</table>
8.2 Exposure controls
Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory Protection
Not necessary.

8.2.2 Hand Protection
Not necessary.

8.2.3 Eye Protection
Not necessary.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
4 - 100 mL Lysis Buffer PA2
Appearance: liquid  Color: colourless  Odor: odorless
pH: 7.5-8.5
Specific gravity: 1.03 g/cm³

9.2 Other information
Relevant Properties of Substance Group
---
9.2.1 Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.
---

SECTION 10: Stability and reactivity

10.1 Reactivity
None

10.2 Chemical stability
No known instability.

10.3 Possibility of hazardous reactions
None.

10.4 Conditions to avoid
Or when indicated in packing insert.

10.5 Incompatible materials
Not necessary.

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
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.
4 - 100 mL Lysis Buffer PA2
Chemical: dodecyl sulfate, sodium salt  CAS No.: 151-21-3
TSCA Inventory: listed  California Proposition 65 List: not listed
Australia NICNAS: not listed  Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: PRTR - Class I Designated Chemical Substance  Japan PDSCL: not listed
Japan ISHL: not listed  South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-21884
LD50/or rat : 1288 mg/kg  LC50/inh rat : 3900 mg/m³

01/20/17  EN (English)
SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

4 - 100 mL Lysis Buffer PA2
Chemical: dodecyl sulfate, sodium salt
LC50 daphnia magna/48h : 6.3 mg/L
LC50fish/96h : 1.31-22.5 mg/L
WGK (DE): 2
Dispersion coefficient (octanol-water) : 1.6
Storage class (VCI): 12-13

Chemical: sodium chloride
WGK (DE): 1
Storage class (VCI): 12-13

Chemical: chemicals/mixture < 2%, not hazardous
WGK (DE): 1
Storage class (VCI): 12-13

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available

SECTION 13: Disposal considerations
Not necessary.

13.1 Waste treatment methods
GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary
14.6  Special precautions for user
not necessary

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

15.2  Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1  List of R, H and P phrases
16.1.1  List of relevant R phrases
16.1.2  List of relevant H phrases
16.1.3  List of relevant P phrases

16.2  Training Advice
Regular safety training.

16.3  Recommended Restriction on Use
None

16.4  Further Information
Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5  Sources of Key Data
Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA .CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT  Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product form: Mixture
Product name: 1 - 25 mL Precipitation Buffer PL3
Cat. No.: BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0 The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

1 - 25 mL Precipitation Buffer PL3

Directive 1999/45/EC
Symbols: do not need labelling as hazardous

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -

No hazard class

2.2 Label elements

1 - 25 mL Precipitation Buffer PL3

Directive 1999/45/EC
Symbols:
- -

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -
2.3 Other hazards

Possible Hazards from physicochemical Properties
According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit. An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms
---

Information pertaining to particular Risks to the Environment
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

1 - 25 mL Precipitation Buffer PL3

Chemical: acetate buffer solution
Concentration: 45 - 60 %
Formula: CH₃ COOH/Me•H₂ O
TSCA Inventory: all listed
KE No.: listed
acc. 1999/45/EC: -
acc. CLP (GHS): not necessary

3.3 Remarks
---

SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact
Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of Vapours
Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
None.

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.
5.4 Additional Information

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Not necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Clean working area with water. Flush used water into drains.

6.4 Reference to other sections
---

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
The original product package allows a safe storage.
Storage class (VCI): 12
WGK (DE):

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1 - 25 mL Precipitation Buffer PL3
Chemical: acetate buffer solution CAS No.: -

8.2 Exposure controls
Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory Protection
Not necessary.

8.2.2 Hand Protection
Not necessary.

8.2.3 Eye Protection
Not necessary.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

1 - 25 mL Precipitation Buffer PL3
Appearance: liquid Color: colourless Odor: acetic
pH: 5-6
Specific gravity: 1.19 g/cm³
9.2 Other information

Relevant Properties of Substance Group

---

9.2.1 Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

---

SECTION 10: Stability and reactivity

10.1 Reactivity

None

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Or when indicated in packing insert.

10.5 Incompatible materials

Not necessary.

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

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

1 - 25 mL Precipitation Buffer PL3

Chemical: acetate buffer solution

CAS No.: -

TSCA Inventory: all listed

Korea Exist.Chem.Inventory: listed

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

1 - 25 mL Precipitation Buffer PL3

Chemical: acetate buffer solution

CAS No.: -

Storage class (VCI): 12

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available
SECTION 13: Disposal considerations
Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary

14.6 Special precautions for user
not necessary

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

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases

16.1.2 List of relevant H phrases

16.1.3 List of relevant P phrases

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

None

16.4 Further Information

Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA.CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- **Product form:** Mixture
- **Product name:** 5 - 125 mL Binding Buffer PB
- **Cat. No.:** BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or the substance or its use is excluded from registration.

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

**Relevant identified uses**
Product for analytical use.

**Exposure Scenario Classification according REACH, RIP 3.2 Codes:** SU 0-2, PC 21, PROC 15, AC
The exposure scenario is integrated into sections 1-16.

**Uses advised against**
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

6 - 125 mL Binding Buffer PB

**Directive 1999/45/EC**
- Symbols: do not need labelling as hazardous

**CLP Directive 1272/2008/EC**

GHS pictograms
- GHS02 Flammable Liquid cat. 3
- GHS07 Acute Tox. 4 oral

**Signal word:** WARNING

**Hazard identification**

<table>
<thead>
<tr>
<th>Hazard classes/categories</th>
<th>Hazard identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquid cat. 3</td>
<td>H226</td>
</tr>
<tr>
<td>Acute Tox. 4 oral</td>
<td>H302</td>
</tr>
</tbody>
</table>

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**.

According CLP (GHS) inner packages must be only labelled with symbol(s) and product identifier (EU 1272/2008 Annex I - 1.5.1.2). Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with **H** and **P** phrases until **125 mL** (EU 1272/2008 Annex I - 1.5.2).
6 - 125 mL Binding Buffer PB

Directive 1999/45/EC

Symbols:
- -

S 16
Keep away from sources of ignition — No smoking.

CLP Directive 1272/2008/EC
GHS pictograms:

GHS02 GHS07
Signal word: WARNING

2.3 Other hazards

Possible Hazards from physicochemical Properties
Flammable properties. Vapour forms explosive mixtures with air.

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
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

6 - 125 mL Binding Buffer PB
Chemical: guanidine hydrochloride
Concentration: 24 - 36 %
Formula: CH₆ ClN₃
Pseudonym: guanidinium chloride
REACH Reg. No.: ---
EC No.: 203-002-3
RTECS: MF4300000
TSCA Inventory: listed
KE No.: KE-18111
acc. 1999/45/EC: R 22
acc. CLP (GHS): H302

Chemical: ethanol (denatured with MEK, acc. 3199/93/EC)
Concentration: 35 - 55 %
Formula: C₂H₆ O
Pseudonym: ethyl alcohol, methylated spirit
REACH Reg. No.: 01-2119457610-43-xxxx
EC No.: 200-578-6
RTECS: KQ6300000
TSCA Inventory: listed
KE No.: KE-13217
acc. 1999/45/EC: R 10
acc. CLP (GHS): H226

3.3 Remarks

List of R, H and P phrases: see section 16
SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

4.1.1 After SKIN Contact
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 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).

4.1.3 After INHALATION of Vapours
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free.

4.1.4 After ORAL Intake
After oral intake lots of water should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed

Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed

No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture


5.3 Advice for firefighters

No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information

---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. Regular staff training is necessary.

6.2 Environmental precautions

not necessary

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

---

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

The original product package allows a safe storage.

- Storage class (VCI): 3
- WGK (DE): 1

7.2.1 Requirements for Stock Rooms and Containers

Keep original product packages tightly closed during handling and storage.
7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Chemical: guanidine hydrochloride</th>
<th>CAS No.: 50-01-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH: not listed</td>
<td></td>
</tr>
<tr>
<td>OSHA: not listed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical: ethanol</th>
<th>CAS No.: 64-17-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL: 950 inh-sys mg/m³</td>
<td></td>
</tr>
<tr>
<td>TRGS 900 (DE): 500 mL/m³ / 960 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Short-term exposure factor: 2 (II), Y</td>
<td>skin resorptive (H), respiratory sensitizable (S(a), skin sensitizable (S(h), teratogenic (Z) not securely excluded / (Y) certainly excluded</td>
</tr>
<tr>
<td>SUVA(CH) MAK value: 500 ppm / 960 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH: TWA 1000 ppm / 1900 mg/m³</td>
<td></td>
</tr>
<tr>
<td>OSHA: TWA 1000 ppm / 1900 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls
Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory Protection
Only if additional recommendations in test instruction or packing insert.

8.2.2 Hand Protection
Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye Protection
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>6 - 125 mL Binding Buffer PB</th>
<th>Appearance: liquid</th>
<th>Color: yellow</th>
<th>Odor: alcoholic</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH:</td>
<td>5-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point:</td>
<td>23 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.01 g/cm³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information

9.2.1 Relevant Properties of Substance Group

---

Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

---
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No known instability.

10.3 Possibility of hazardous reactions
No data available. Note: Can form very reactive substances with oxidizing agents.

10.4 Conditions to avoid
Or when indicated in packing insert.

10.5 Incompatible materials
Not necessary.

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
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

6 - 125 mL Binding Buffer PB

Chemical: guanidine hydrochloride
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed
Japan CSCL/PRTR: not listed
Japan PDSCL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-18111
LD50 or l rat : 475 mg/kg
LC50 inh rat : 5.3x10^5 mg/m³
LD50 inh rbt : >2000 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: ethanol
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed
Japan CSCL/PRTR: not listed
Japan PDSCL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50 inh rat : 6200 mg/kg
LC50 inh gog : 21.9 g/m³
LC50 inh rbt : 1400 mg/kg
LC50 inh mouse : 350 g/m³
LC50 inh rat : 20.0 g/m³
LD50 inh rbt : 20 000 mg/kg
LD50 inh mouse : 3450 mg/kg
TRGS 905 (DE): K5, M5, R5 C
SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

**6 - 125 mL Binding Buffer PB**

**Chemical:** guanidine hydrochloride

- **LC₅₀** _leuciscus idus/96h_: 1759 mg/L
- **WGK (DE):** 1
- **Storage class (VCI):** 12

**Chemical:** ethanol

- **PNEC (fresh water):** 0.96 mg/L
- **LC₅₀** _daphnia magna/48h_: >100 mg/L
- **LC₅₀** _pimephales promelas/96h_: 13400 - 15100 mg/L
- **LC₅₀** _leuciscus idus/96h_: 8140 mg/L
- **LC₅₀** _nitritia nitrofen/96h_: 13 g/L
- **EC₅₀** _daphnia/48h_: 9.3 - 14.2 g/L
- **EC₅₀** _pseudomona putita/16h_: EC₅₀: 6500 mg/L
- **IC₅₀** _scenedesmus quadricauda/72h_: 5000 mg/L
- **WGK (DE):** 1

**Dispersion coefficient (octanol-water):** -0.31

**Storage class (VCI):** 3

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

UN 1993 class 3 III, excepted quantities (≤30 mL/∑≤1 L) = ADR/ IATA E1

14.1 UN number: 1993

14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol mixture)

14.3 Class: III

14.4 Packing group: III

Road transport

- **Classification code:** F1
- **Limited Quantity:** E 1
- **Exceptional Quantity:** 5 L

Air transport

- **PAX:** 355
- **COA:** 366

Maritime transport

- **EmS:** F-E, S-E

14.5 Environmental hazards

not necessary, contains only small quantities of hazardous substances
14.6 Special precautions for user
not necessary

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

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz - ChemG), revised on August 2013

German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC

TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases
R10 Flammable.
R22 Harmful if swallowed.

16.1.2 List of relevant H phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.

16.1.3 List of relevant P phrases
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P301+312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.
P330 Rinse mouth.
P370+378 In case of fire: Use all extinguisher media to extinguish.
P403+235 Store in a well-ventilated place. Keep cool.

16.2 Training Advice
Regular safety training.

16.3 Recommended Restriction on Use
Only for professional user.
An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further Information

Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time.

This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress

TRGS 900, German engineering rules governing limits in air at work, updated February 2015

SUVA .CH, Limits in air at work 2009, revised on 01.2009

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product form: Mixture
Product name: 5 - 125 mL Wash Buffer PAW1
Cat. No.: BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.
Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0 The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

6 - 125 mL Wash Buffer PAW1

Directive 1999/45/EC
Symbols

R 36
Xi

CLP Directive 1272/2008/EC

GHS pictograms

GHS02
GHS07

Signal word WARNING

<table>
<thead>
<tr>
<th>Hazard identification</th>
<th>Hazard classes/categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>H226</td>
<td>Flammable Liquid cat. 3</td>
</tr>
<tr>
<td>H302</td>
<td>Acute Tox. 4 oral</td>
</tr>
<tr>
<td>H319</td>
<td>Eye Irritation cat. 2</td>
</tr>
<tr>
<td>H336</td>
<td>STOT SE 3</td>
</tr>
</tbody>
</table>

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 identifier (EU 1272/2008 Annex I - 1.5.1.2).
Harmful chemicals/mixtures with signal word: WARNING and highly flammable chemicals/mixtures must not be labelled with H and P
6 - 125 mL Wash Buffer PAW1

Directive 1999/45/EC
Symbols:

Xi
R 36
Irritating to eyes.
---
S 16-26-39
Keep away from sources of ignition — No smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

CLP Directive 1272/2008/EC
GHS pictograms:

GHS02  GHS07
Signal word: WARNING

2.3 Other hazards

Possible Hazards from physicochemical Properties
In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. Vapour forms explosive mixtures with air.

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
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

6 - 125 mL Wash Buffer PAW1
Chemical: guanidine hydrochloride
Concentration: 36 - 50 %
Formula: CH6 ClN3
Pseudonym: guanidinium chloride
REACH Reg. No.: ---
EC No.: 200-002-3
RTECS: MF4300000
TSCA Inventory: listed
KE No.: KE-18111
acc. 1999/45/EC: R 22-36
CAS No.: 50-01-1
Indice No.: 607-148-00-0
MFCD: 00013026
acc. CLP (GHS): H302, H319
Wash Buffer PAW1
Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 20/01/17 Version: 1.0

Chemical: 2-propanol  CAS No.: 67-63-0
Concentration: 20 - 50 %
Formula: C₃H₈O
Pseudonym: isopropanol, IPA, propan-2-ol
REACH Reg. No.: 01-2119457558-25-xxxx
EC No.: 200-661-7
Indice No.: 603-117-00-0
RTECS: NT8050000
MFCD: 00011674
TSCA Inventory: listed
KE No.: KE-29363
acc. 1999/45/EC: R 10-36-67
acc. CLP (GHS): H226, H319, H336

3.3 Remarks
List of R, H and P phrases: see section 16

SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

4.1.1 After SKIN Contact
Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

4.1.2 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).

4.1.3 After INHALATION of Vapours
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free.

4.1.4 After ORAL Intake
After oral intake lots of water should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information
---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Regular staff training is necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Bind any escaping liquid with inert absorbent. Collect small amounts of leaked liquid and flush with water into drains.
6.4 Reference to other sections

---

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

The original product package allows a safe storage.

Storage class (VCI): 3

WGK (DE): 1

7.2.1 Requirements for Stock Rooms and Containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS No.</th>
<th>NIOSH:</th>
<th>OSHA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>guanidine hydrochloride</td>
<td>50-01-1</td>
<td>not listed</td>
<td>not listed</td>
</tr>
<tr>
<td>2-propanol</td>
<td>67-63-0</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical</th>
<th>NIOSH:</th>
<th>OSHA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-propanol</td>
<td>not listed</td>
<td>not listed</td>
</tr>
</tbody>
</table>

DNEL: 500 inh mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 200 ppm / 500 mg/m³

E/e respirable

Short-term exposure factor: 2 (II), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 200 ppm / 500 mg/m³

TRGS 903 (DE): B/b, U/b 25Aceton mg/L

B blood, U urine

NIOSH: TWA 400 ppm / 980 mg/m³; ST 500 ppm / 1225 mg/m³

OSHA: TWA 400 ppm / 980 mg/m³

8.2 Exposure controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory Protection

Only if additional recommendations in test instruction or packing insert.

8.2.2 Hand Protection

Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye Protection

Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin Protection

Not necessary.

8.2.5 Personal Hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>6 - 125 mL Wash Buffer PAW1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance: liquid</td>
<td>Color: colourless</td>
<td>Odor: alcoholic</td>
</tr>
<tr>
<td>Flash point:</td>
<td>25 °C</td>
<td></td>
</tr>
<tr>
<td>Specific gravity:</td>
<td>1.06 g/cm³</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information

Relevant Properties of Substance Group

---

9.2.1 Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

---

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No known instability.

10.3 Possibility of hazardous reactions

No data available. Note: Can form very reactive substances with oxidizing agents.

10.4 Conditions to avoid

Or when indicated in packing insert.

10.5 Incompatible materials

Not necessary.

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

Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

Chemical: guanidine hydrochloride

<table>
<thead>
<tr>
<th>CAS No.: 50-01-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA Inventory:</td>
</tr>
<tr>
<td>Australia NICNAS:</td>
</tr>
<tr>
<td>Japan CSCL/PRTR:</td>
</tr>
<tr>
<td>Japan PDSCL:</td>
</tr>
<tr>
<td>South Korea TCCA:</td>
</tr>
<tr>
<td>Korea Exist.Chem.Inventory:</td>
</tr>
<tr>
<td>LD50/ori rat :</td>
</tr>
<tr>
<td>LC50/ori rat :</td>
</tr>
<tr>
<td>LD50/drm rat :</td>
</tr>
</tbody>
</table>

Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: 2-propanol

<table>
<thead>
<tr>
<th>CAS No.: 67-63-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA Inventory:</td>
</tr>
<tr>
<td>ACGIH: 1230 ppm</td>
</tr>
<tr>
<td>Exposure Routes:</td>
</tr>
<tr>
<td>Target Organs:</td>
</tr>
<tr>
<td>Symptoms:</td>
</tr>
<tr>
<td>Japan CSCL/PRTR:</td>
</tr>
<tr>
<td>Japan PDSCL:</td>
</tr>
<tr>
<td>South Korea TCCA:</td>
</tr>
<tr>
<td>Korea Exist.Chem.Inventory:</td>
</tr>
<tr>
<td>LD50/ori rat :</td>
</tr>
<tr>
<td>LC_Low/ori hmn :</td>
</tr>
</tbody>
</table>
12.1 Toxicity
Following information is valid for pure substances.

6 - 125 mL Wash Buffer PAW1

- Guanidine hydrochloride
  - CAS No.: 50-01-1
  - LC50leuciscus idus/96h: 1759 mg/L
  - WGK (DE): 1
  - Storage class (VCI): 12

- 2-Propanol
  - CAS No.: 67-63-0
  - PNEC (fresh water): 140.9 mg/L
  - LC50leuciscus idus/96h: 1400 mg/L
  - EC50daphnia/48h: 13.3 g/L
  - IC50scenedesmus quadricauda/72h: >1000 mg/L
  - EC50pseudomonas putita/16h: EC5: 1050 mg/L
  - WGK (DE): 1
  - Storage class (VCI): 3

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available

SECTION 13: Disposal considerations
Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods
Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

- UN 1993 class 3 III, Excepted Quantities (≤30 mL/∑≤1 L) = ADR/ IATA E1
- UN number: 1993
- UN proper shipping name: Flammable liquid, n.o.s. (2-propanol mixture)
- Class: 3
- Packing group: III

Road transport
- Classification code: F1
- Limited Quantity: 5 L
- Excepted Quantity: E1
- Tunnel restriction code: E
- Special instructions: 640E

Air transport
- PAX: 355
- max. weight PAX: 60 L
- CAG: 366
- max. weight CAG: 220 L

Maritime transport
- EmS: F-E, S-E
- Storage category: A
14.5 Environmental hazards
not necessary, contains only small quantities of hazardous substances

14.6 Special precautions for user
not necessary

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
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases
R10 Flammable.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

16.1.2 List of relevant H phrases
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

16.1.3 List of relevant P phrases
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P264W Wash with water thoroughly after handling.
P280sh Wear protective gloves/eye protection.
P301+312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 Rinse mouth.
P337+313 If eye irritation persists: Get medical advice/attention.
P370+378 In case of fire: Use all extinguisher media to extinguish.
P403+235 Store in a well-ventilated place. Keep cool.

16.2 Training Advice
Regular safety training.

16.3 Recommended Restriction on Use
Only for professional user.
An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further Information
Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product form: Mixture
Product name: 5 - 50 mL Wash Buffer PAW2 (conc.)
Cat. No.: BIO-52068, BIO-52069 & BIO-52070
REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days))

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

6 - 50 mL Wash Buffer PAW2 (conc.)

Directive 1999/45/EC

- Symbols: do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms: do not need labelling as hazardous
Signal word: -

No hazard class

2.2 Label elements

6 - 50 mL Wash Buffer PAW2 (conc.)

Directive 1999/45/EC

Symbols:
- 

CLP Directive 1272/2008/EC

GHS pictograms: do not need labelling as hazardous
Signal word: -
2.3 Other hazards

Possible Hazards from physicochemical Properties
According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit.
An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms
---

Information pertaining to particular Risks to the Environment
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

6 - 50 mL Wash Buffer PAW2 (conc.)
Chemical: chemicals/mixture < 1%, no declaration necessary
Concentration: 0,1 - 1 %
KE No.: listed
acc. 1999/45/EC:  -
acc. CLP (GHS): not necessary

3.3 Remarks
- - -

SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact
Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of Vapours
Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
None.

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information
---
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Not necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Clean working area with water. Flush used water into drains.

6.4 Reference to other sections
---

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
The original product package allows a safe storage.
Storage class (VCI): 12
WGK (DE): 1

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls
Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory Protection
Not necessary.

8.2.2 Hand Protection
Not necessary.

8.2.3 Eye Protection
Not necessary.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

6 - 50 mL Wash Buffer PAW2 (conc.)
Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: -

pH: 7-8
Specific gravity: 1.00 g/cm³

9.2 Other information
Relevant Properties of Substance Group
---
9.2.1 Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

---

SECTION 10: Stability and reactivity

10.1 Reactivity
None

10.2 Chemical stability
No known instability.

10.3 Possibility of hazardous reactions
None.

10.4 Conditions to avoid
Or when indicated in packing insert.

10.5 Incompatible materials
Not necessary.

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
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

6 - 50 mL Wash Buffer PAW2 (conc.)
Chemical: chemicals/mixture < 1%, no declaration necessary
CAS No.: -
Korea Exist.Chem.Inventory: listed

SECTION 12: Ecological information

12.1 Toxicity
Following information is valid for pure substances.

6 - 50 mL Wash Buffer PAW2 (conc.)
Chemical: chemicals/mixture < 1%, no declaration necessary
WGK (DE): 1
Storage class (VCI): 12-13
CAS No.: -

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available
SECTION 13: Disposal considerations

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary

14.6 Special precautions for user
not necessary

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

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases

16.1.2 List of relevant H phrases

16.1.3 List of relevant P phrases

16.2 Training Advice
Regular safety training.

16.3 Recommended Restriction on Use
None

16.4 Further Information

Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA.CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Product form: Mixture
Product name: 10 - 30 mL Elution Buffer PG
Cat. No.: BIO-52068, BIO-52069 & BIO-52070

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses
Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet
Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number
+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
13 - 30 mL Elution Buffer PG

Directive 1999/45/EC
Symbols: do not need labelling as hazardous

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -

No hazard class

2.2 Label elements

13 - 30 mL Elution Buffer PG

Directive 1999/45/EC
Symbols: -

CLP Directive 1272/2008/EC
GHS pictograms: do not need labelling as hazardous
Signal word: -
2.3 Other hazards

Possible Hazards from physicochemical Properties
According to our current status of knowledge and experience we state, that this product does not contain any substances, which - in accordance with EC regulations 1272/2008/EC, 1907/2006/EC, 1999/45/EC and German Regulations for Hazardous goods - have to be declared as dangerous goods, either because of their applied concentration or because of their total amount in anyone kit.
An individual package has considerably less hazardous potential.

Information pertaining to particular Risks to Human and possible Symptoms
---

Information pertaining to particular Risks to the Environment
---

Other Hazards
---

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

13 - 30 mL Elution Buffer PG
Chemical: chemicals/mixture < 1%, no declaration necessary
Concentration: 0.1 - 1%
KE No.: listed
acc. 1999/45/EC: -
acc. CLP (GHS): not necessary

3.3 Remarks
---

SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately.

4.1.1 After SKIN Contact
Not necessary.

4.1.2 After EYE Contact
Not necessary.

4.1.3 After INHALATION of Vapours
Not necessary.

4.1.4 After ORAL Intake
Not necessary.

4.2 Most important symptoms and effects, both acute and delayed
Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
No additionally recommendations.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
None.

5.3 Advice for firefighters
No, for listed product. Product package burns like paper or plastic.

5.4 Additional Information
---
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Not necessary.

6.2 Environmental precautions
not necessary

6.3 Methods and material for containment and cleaning up
Clean working area with water. Flush used water into drains.

6.4 Reference to other sections
---

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
The original product package allows a safe storage.
Storage class (VCI): 12
WGK (DE): 1

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
13 - 30 mL Elution Buffer PG
Chemical: chemicals/mixture < 1%, no declaration necessary
CAS No.: -

8.2 Exposure controls
Not necessary. Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities.

8.2.1 Respiratory Protection
Not necessary.

8.2.2 Hand Protection
Not necessary.

8.2.3 Eye Protection
Not necessary.

8.2.4 Skin Protection
Not necessary.

8.2.5 Personal Hygiene
Information not necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
13 - 30 mL Elution Buffer PG
Appearance: liquid
Color: colourless
Odor: odorless
pH: 8.9
Specific gravity: 1.0 g/cm³

9.2 Other information
Relevant Properties of Substance Group
---
9.2.1 Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

SECTION 10: Stability and reactivity

10.1 Reactivity
None

10.2 Chemical stability
No known instability.

10.3 Possibility of hazardous reactions
None.

10.4 Conditions to avoid
Or when indicated in packing insert.

10.5 Incompatible materials
Not necessary.

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
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

13 - 30 mL Elution Buffer PG
Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: -
Korea Exist. Chem. Inventory: listed

SECTION 12: Ecological information

12.1 Toxicity
Following information is valid for pure substances.

13 - 30 mL Elution Buffer PG
Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: -
WGK (DE): 1
Storage class (VCI): 12-13

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available
SECTION 13: Disposal considerations

Not necessary.

13.1 Waste treatment methods

GENERAL: Empty solids into municipal waste, empty liquids diluted into drains. Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information

14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary

14.6 Special precautions for user
not necessary

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

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases

16.1.2 List of relevant H phrases

16.1.3 List of relevant P phrases

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

None

16.4 Further Information

Bioline Reagents Ltd provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

Bioline Reagents Ltd makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bioline Reagents Ltd will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

16.5 Sources of Key Data

Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 497/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA .CH, Limits in air at work 2009, revised on 01.2009
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product form: Mixture
Product name: 1 - 5 x 80 U, Size C, RNase-free DNase I (lyo)
Cat. No.: BIO-52071, BIO-52072, BIO-52073, BIO-52074, BIO-52075, BIO-52076 & BIO-52077

REACH Registration number(s): see SECTION 3.1/3.2 or
A registration number for the substance(s) does not exist because the annual tonnage does not require registration or
the substance or its use is excluded from registration.

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

Relevant identified uses
Product for analytical use.

Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
The exposure scenario is integrated into sections 1-16.

Uses advised against
not described

1.3 Details of the supplier of the safety data sheet

Bioline Reagents Ltd.
Humber Road
London
NW2 6EW
United Kingdom
T: +44 (0)20 8830 5300
F: +44 (0)20 8452 2822
E-mail: info.uk@bioline.com

1.4 Emergency telephone number

+49 (0) 7611 9240 (Germany)
(24 hours, 7 days)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

80 U, Size C, RNase-free DNase I (lyo)

Directive 1999/45/EC

Symbols

CLP Directive 1272/2008/EC

GHS pictograms

<table>
<thead>
<tr>
<th>Hazard identification</th>
<th>Hazard classes/categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>H317</td>
<td>Skin Sensitisation cat. 1A/1B</td>
</tr>
<tr>
<td>H334</td>
<td>Respiratory Sensitisation cat. 1A/1B</td>
</tr>
</tbody>
</table>

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 |
This labelling exemption is NOT valid for sensibilizing mixtures.

According CLP (GHS) inner packages must be only labelled with symbol(s) and product identificator (EU 1272/2008 Annex I - 1.5.1.2).
Harmful chemicals/mixtures with signal word: WARNING must not be labelled with H and P phrases until 125 mL (EU 1272/2008 Annex I - 1.5.2). This labelling exemption is NOT valid for sensibilizing substances.
RNase-free DNase I (lyo)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 20/01/17 Version: 1.0

80 U, Size C, RNase-free DNase I (lyo)

Directive 1999/45/EC

Symbols:

Xn
R 42/43
May cause sensitization by inhalation and skin contact.

S 22-24
Do not breathe dust. Avoid contact with skin.

CLP Directive 1272/2008/EC

GHS pictograms:

GHS07  GHS08

Signal word: DANGER

H317, H334
May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261S, P272, P280sh, P302+352, P304+340, P333+313, P342+311, P363
Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye
protection. IF ON SKIN: Wash with plenty of water/… IF INHALED: Remove person to fresh air and keep comfortable for
breathing. If skin irritation or rash occurs: Get medical advice/attention. If experiencing respiratory symptoms: Call a
POISON CENTER/doctor/… Wash contaminated clothing before reuse.

2.3 Other hazards

Possible Hazards from physicochemical Properties

Information pertaining to particular Risks to Human and possible Symptoms
Cause after skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in
repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Kit contains small amounts of enzymes, which may cause sensitization by direct and repeated contact.

Information pertaining to particular Risks to the Environment
PBT: not applicable
vPvB: not applicable

Other Hazards

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

80 U, Size C, RNase-free DNase I (lyo)

Chemical: rDNase
Concentration: 90 - 100 %
Formula: Enzyme Comm. No. 3.1.21.1, origin: cloned
Pseudonym: Nuclease, deoxyribo-
EC No.: 232-667-0
RTECS: RF0750000
TSCA Inventory: listed
KE No.: KE-09612

3.3 Remarks

List of R, H and P phrases: see section 16
SECTION 4: First aid measures

4.1 Description of first aid measures
Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Take to a doctor, in a raised position if there are breathing difficulties.

4.1.1 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. Avoid neutralisation. Then apply a loose bandage.

4.1.2 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).

4.1.3 After INHALATION of Vapours
After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function.

4.1.4 After ORAL Intake
After oral intake lots of water should be drunk after it has been ingested.

4.2 Most important symptoms and effects, both acute and delayed
Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid inhalation of dust. ---

4.3 Indication of any immediate medical attention and special treatment needed
After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. Inform patient respectively further measures and the possibility of long-term damages.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

5.2 Special hazards arising from the substance or mixture
Formation of hazardous and caustic vapour-air mixtures possible.

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 Additional Information
Danger for environment only in the event of a large-scale leakage or formation of hazardous substances. ---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Do not breathe vapours. Wear suitable protective gloves (see 8.2.2). Wear eye protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions
not necessary

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. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections
see information in section 5.4 ---
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handling in accordance with the test instruction, that comes with the product. Use only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities
The original product package allows a safe storage.

7.2.1 Requirements for Stock Rooms and Containers
Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)
Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
80 U, Size C, RNase-free DNase I (lyo)
Chemical:  rDNase
CAS No.: 9003-98-9

8.2 Exposure controls
Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

8.2.1 Respiratory Protection
Only if additional recommendations in test instruction or packing insert. Use for open access of these substances for example a protection filter, class A/AX.

8.2.2 Hand Protection
Yes, gloves according EN 374 (permeation time >30 min - level 2), consist of PVC, natural latex, Neopren, or Nitril (f.ex. from Ansell or KCL). Use for short times chemical resistant latex gloves with code EN 374-3 level 1.

8.2.3 Eye Protection
Yes, safety glasses according EN 166 with integrated side shields or wrap-around protection.

8.2.4 Skin Protection
Recommended to avoid contamination with these hazards.

8.2.5 Personal Hygiene
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
80 U, Size C, RNase-free DNase I (lyo)
Appearance: solid (lyoph.)  Color: white  Odor: odorless

9.2 Other information
Relevant Properties of Substance Group

9.2.1
Data for the other parameters of the mixtures are not available, because no registration and no chemical safety report is required.

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No known instability.
10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Not necessary. Only if on label. Or 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
Following information is valid for pure substances. Quantitative data on the toxicity of this product are not available.

80 U, Size C, RNase-free DNase I (lyo)
Chemical: rDNase
CAS No.: 9003-98-9
TSCA Inventory: listed
Japan CSCL/PRTR: not listed
Korea Exist.Chem.Inventory: KE-09612
Acute Effects: Cause after skin contact, impairments of health when ingested in small quantities.
Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

SECTION 12: Ecological information

12.1 Toxicity
Following information is valid for pure substances.

80 U, Size C, RNase-free DNase I (lyo)
Chemical: rDNase
CAS No.: 9003-98-9
WGK (DE): 1
Storage class (VCI): 13

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available

SECTION 13: Disposal considerations
Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06).

13.1 Waste treatment methods
Normally it is possible to empty small amounts (diluted!) into drains.

SECTION 14: Transport information
14.1 - 14.4 Not necessary

14.5 Environmental hazards
not necessary, contains only small quantities of hazardous substances
14.6 Special precautions for user
not necessary

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
German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013
German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC
TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

15.2 Chemical safety assessment
not necessary for these small amounts

SECTION 16: Other Information

16.1 List of R, H and P phrases

16.1.1 List of relevant R phrases
R42/43 May cause sensitization by inhalation and skin contact.

16.1.2 List of relevant H phrases
H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

16.1.3 List of relevant P phrases
P261S Avoid breathing dust.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280sh Wear protective gloves/eye protection.
P302+352 IF ON SKIN: Wash with plenty of water/…
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+313 If skin irritation or rash occurs: Get medical advice/attention.
P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/…
P363 Wash contaminated clothing before reuse.

16.2 Training Advice
Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

16.3 Recommended Restriction on Use
Only for professional user.
Look about employee restrictions for young people (f. ex. 94/33/EC or DE § 22 JArbSchG)! Look about employee restrictions for pregnant women and nursing women (f.ex. 92/85/EEC or DE §§ 4 und 5 MuSchRiV)! An individual package of this product or test kit has a moderate hazardous potential.

16.4 Further Information
Bioline Reagents Ltd G provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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16.5 Sources of Key Data
Regulation 453/2010/EU REACH - REQUIREMENTS FOR THE COMPILATION OF SAFETY DATA SHEETS
Regulation 487/2013/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated February 2015
SUVA .CH, Limits in air at work 2009, revised on 01.2009
TRGS 907, German engineering rules governing listing of substances and causes of sensitizations, updated November 2011
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)