

BIO-52076
BIO-52077

ISOLATE II RNA Plant Kit
Safety Data Sheet

meridian BIOSCIENCE™

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product form: Mixture
 Product name: 1 - 125 mL Lysis Buffer RLY
 Cat. No.: BIO-52071, BIO-52072, BIO-52073, BIO-52074, BIO-52075, BIO-52076, BIO-52077 & BIO-52079

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

Meridian Bioscience / 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@meridianlifescience.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 - 125 mL Lysis Buffer RLY**

Directive 1999/45/EC

Symbols - do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms



GHS07

Signal word WARNING

Hazard identification**Hazard classes/categories**

EUH031	031 not defined
H302	Acute Tox. 4 oral
H412	Hazardous to the aquatic environment - chronic cat. 3

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** must not be labelled with H and P phrases until **125 mL** (EU 1272/2008 Annex I - 1.5.2).

1 - 125 mL Lysis Buffer RLY

Directive 1999/45/EC

Symbols:

-

-

CLP Directive 1272/2008/EC

GHS pictograms:



GHS07

Signal word: WARNING

2.3 Other hazards

Possible Hazards from physicochemical Properties

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

1 - 125 mL Lysis Buffer RLY

Chemical:	guanidinium thiocyanate	CAS No.:	593-84-0
Concentration:	30 - 60 %		
Formula:	C ₂ H ₆ N ₄ S		
Pseudonym:	guanidine rhodanide		
REACH Preregistration (for):	05-2114282043-57-0000 (2018)		
EC No.:	209-812-1	Indice No.:	615-004-00-3
RTECS:	XL1225000	MFCD:	00013027
TSCA Inventory:	listed		
KE No.:	not listed		
acc. 1999/45/EC:	R 20/21/22-32-52/53	acc. CLP (GHS):	H302, H412, EUH031

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**
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.
- 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, contains only small amounts of these substances
- 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): | 12 |
| WGK (DE): | 3 |
- 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 - 125 mL Lysis Buffer RLY | | |
| Chemical: | <i>guanidinium thiocyanate</i> | CAS No.: 593-84-0 |
| NIOSH: | not listed | |
| OSHA: | not listed | |
- 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

1 - 125 mL Lysis Buffer RLY

Appearance: liquid Color: colourless Odor: odorless
pH: 6.5-7.5
Specific gravity: 1.13 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

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. Possible: Contact with acids liberates toxic gas.

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 - 125 mL Lysis Buffer RLY

Chemical:	<i>guanidinium thiocyanate</i>	CAS No.:	593-84-0
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Australia NICNAS:	not listed	Canada CEPA 1999:	DSL yes
Japan CSCL/PRTR:	not listed		
Japan PDSCL:	not listed	Japan ISHL:	not listed
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	not listed		
LD50 _{orl rat} :	593 mg/kg		
LC50 _{drum rbt} :	2000 mg/m ³		

LC50_{ihl rat} : 5.319_{4h} mg/L

LD50_{ipr mus} : 300 mg/kg

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

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

1 - 125 mL Lysis Buffer RLY

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

Harmful to aquatic life with long lasting effects. Avoid contact of substance/mixture to environment.

Environmental hazards must not be labelled with P phrases until 125 mL or 125 g (EU 1272/2008 Annex I - 1.5.2).

WGK (DE): 3

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

Do not collect in acidic waste. May form toxic gases.

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, contains only small amounts of these 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

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

16.1.2 List of relevant H phrases

H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
EUH031 Contact with acids liberates toxic gas.

16.1.3 List of relevant P phrases

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

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

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 - 25 mL Lysis Buffer RLS
Cat. No.: 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

Meridian Bioscience / 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@meridianlifescience.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

10 - 25 mL Lysis Buffer RLS

Directive 1999/45/EC

Symbols - do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms



GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H315	Skin Irritation cat. 2
H319	Eye Irritation cat. 2

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** must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2).

10 - 25 mL Lysis Buffer RLS

Directive 1999/45/EC

Symbols:

-

S 26-37/39

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

CLP Directive 1272/2008/EC

GHS pictograms:



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.

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****10 - 25 mL Lysis Buffer RLS**Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

Concentration: 50 - 66 %

Formula: CH₆ ClN₃

Pseudonym: guanidinium chloride

REACH Reg. No.: ---

REACH Preregistration (for): 05-2114282045-53-0000 (2018)

EC No.: 200-002-3

Indice No.: 607-148-00-0

RTECS: MF4300000

MFCD: 00013026

TSCA Inventory: listed

KE No.: KE-18111

acc. 1999/45/EC: R 22-36/38

acc. CLP (GHS): H302, H315, H319

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**
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.
- 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): 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**
- | | |
|--|------------------|
| 10 - 25 mL Lysis Buffer RLS | |
| Chemical: <i>guanidine hydrochloride</i> | CAS No.: 50-01-1 |
| NIOSH: not listed | |
| OSHA: not listed | |

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

10 - 25 mL Lysis Buffer RLS

Appearance: liquid

Color: colourless

Odor: odorless

pH:

4.5-5.0

Specific gravity:

1.18 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

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.

10 - 25 mL Lysis Buffer RLS

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

TSCA Inventory: listed

California Proposition 65 List: not listed

Australia NICNAS: not listed

Canada CEPA 1999: DSL yes

Japan CSCL/PRTR: not listed

Japan PDSCl: not listed

Japan ISHL:

not listed

South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-18111
LD50_{orl rat}: 475 mg/kg
LC50_{ihl rat}: 5.3_{4h} mg/m³
LD50_{drm rbt}: >2000 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

10 - 25 mL Lysis Buffer RLS

Chemical:	<i>guanidine hydrochloride</i>	CAS No.: 50-01-1
LC50 _{leuciscus idus/96h} :	1759 mg/L	
WGK (DE):	1	WGK No.: 0788
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

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

R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.

16.1.2 List of relevant H phrases

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

16.1.3 List of relevant P phrases

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.
P302+352 IF ON SKIN: Wash with plenty of water/...
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.
P332+313 If skin irritation occurs: Get medical advice/attention.
P337+313 If eye irritation persists: Get medical advice/attention.

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

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 - 80 mL Wash Buffer RW1
 Cat. No.: BIO-52071, BIO-52072, BIO-52073, BIO-52074, BIO-52075, BIO-52076 & BIO-52077

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

Meridian Bioscience / 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@meridianlifescience.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****10 - 80 mL Wash Buffer RW1**

Directive 1999/45/EC

Symbols do not need labelling as hazardous

CLP Directive 1272/2008/EC

GHS pictograms



GHS02 GHS07

Signal word WARNING

Hazard identification

H226
 H302

Hazard classes/categories

Flammable Liquid cat. 3
 Acute Tox. 4 oral

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 phrases until **125 mL** or **125 g** (EU 1272/2008 Annex I - 1.5.2).

10 - 80 mL Wash Buffer RW1

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

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

--- Flammable properties. Vapour forms explosive mixtures with air.

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

10 - 80 mL Wash Buffer RW1

Chemical:	<i>guanidine hydrochloride</i>	CAS No.:	50-01-1
Concentration:	24 - <36 %		
Formula:	CH ₆ ClN ₃		
Pseudonym:	guanidinium chloride		
REACH Preregistration (for):	05-2114282045-53-0000 (2018)		
EC No.:	200-002-3	Indice No.:	607-148-00-0
RTECS:	MF4300000	MFCD:	00013026
TSCA Inventory:	listed		
KE No.:	KE-18111		
acc. 1999/45/EC:	R 22	acc. CLP (GHS):	H302
Chemical:	<i>ethanol</i> (denatured with MEK, acc. 3199/93/EC)	CAS No.:	64-17-5
Concentration:	20 - <35 %		
Formula:	C ₂ H ₆ O		
Pseudonym:	ethyl alcohol, methylated spirit		
REACH Reg. No.:	01-2119457610-43-xxxx		
EC No.:	200-578-6	Indice No.:	603-002-00-5
RTECS:	KQ6300000	MFCD:	00003568
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

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

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.

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 of MACHEREY-NAGEL allows a safe storage.

Storage class (German chemical industry): see chapter 12.1

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

10 - 80 mL Wash Buffer RW1

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

NIOSH: not listed

OSHA: not listed

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: 950_{inh-sys} mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 500 mL/m³ / 960 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: 500 ppm / 960 mg/m³

NIOSH: TWA 1000 ppm / 1900 mg/m³

OSHA: TWA 1000 ppm / 1900 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 (f.ex. from Ansell or KCL).

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

10 - 80 mL Wash Buffer RW1

Appearance : liquid Color : colourless

Odor : alcoholic

pH: 6.5-7.5

Flash point: 28 °C

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.

10 - 80 mL Wash Buffer RW1

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 TSCA Inventory: listed California Proposition 65 List: not listed
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: not listed
 Japan PDSCl: not listed Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-18111
 LD50_{orl rat}: 475 mg/kg
 LC50_{ihl rat}: 5.34_h mg/m³
 LD50_{drm rbt}: >2000 mg/kg
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Proposition 65 List: 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 Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: not listed Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
 Japan PDSCl: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-13217
 LD50_{orl rat}: 6200 mg/kg
 LC_{Lowihl gpg}: 21.9 g/m³
 LC_{Loworl hmn}: 1400 mg/kg
 LC50_{ihl mouse}: 39_{4h} g/m³
 LC50_{ihl rat}: 20_{10h} g/m³
 LD50_{drm rbt}: 20 000 mg/kg
 LD50_{oral mouse}: 3450 mg/kg
 TRGS 905 (DE): K5, M5, Rf C

SECTION 12: Ecological information**12.1 Toxicity**

Following information is valid for pure substances.

10 - 80 mL Wash Buffer RW1

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 LC50_{leuciscus idus/96h}: 1759 mg/L
 WGK (DE): 1 WGK No.: 0788
 Storage class (VCI): 12

Chemical: *ethanol* CAS No.: 64-17-5
 PNEC_(fresh water): 0.96 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{daphnia magna/48h}: >100 mg/L
 LC50_{pimephales promelas/96h}: 13400 - 15100 mg/L

LC50 _{leuciscus idus/96h} :	8140 _{48h} mg/L
LC50 _{fish/96h} :	13 g/L
EC50 _{daphnia/48h} :	9.3-14.2 g/L
IC50 _{scenedesmus quadricauda/72h} :	5000 _{7d} mg/L
EC10 _{pseudomonas putida/16h} :	EC5: 6500 mg/L
WGK (DE):	1 WGK No.: 0096
Dispersion coefficient (o-w):	-0.31
Storage class (VC1):	3

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

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 UN number: 1993 **14.2 UN proper shipping name:** Flammable liquid, n.o.s. (ethanol mixture)

14.3 Class: 3 **14.4 Packing group:** III

Road transport

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Tunnel restriction code: E

Special instructions: 640E

Air transport

PAX: 355

CAO: 366

max. weight PAX: 60 L

max. weight CAO: 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.

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.

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 - 75 mL Wash Buffer RW2 (conc.)
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

Meridian Bioscience / 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@meridianlifescience.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 - 75 mL Wash Buffer RW2 (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**5 - 75 mL Wash Buffer RW2 (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

5 - 75 mL Wash Buffer RW2 (conc.)

Chemical: *chemicals/mixture < 1%, no declaration necessary*

CAS No.: -

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

5 - 75 mL Wash Buffer RW2 (conc.)

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

5 - 75 mL Wash Buffer RW2 (conc.)

Appearance: liquid

Color: colourless

Odor: odorless

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.

5 - 75 mL Wash Buffer RW2 (conc.)

Chemical: *chemicals/mixture < 1%, no declaration necessary*
Korea Exist.Chem.Inventory: listed

CAS No.: -

SECTION 12: Ecological information**12.1 Toxicity**

Following information is valid for pure substances.

5 - 75 mL Wash Buffer RW2 (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

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: 10 - 150 mL Membrane Desalting Buffer MEM
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

Meridian Bioscience / 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@meridianlifescience.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****10 - 150 mL Membrane Desalting Buffer MEM**

Directive 1999/45/EC

Symbols

R 11



F

CLP Directive 1272/2008/EC

GHS pictograms



GHS02

Signal word

DANGER

Hazard identification

H225

Hazard classes/categories

Flammable Liquid cat. 2

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 phrases until **125 mL** (EU 1272/2008 Annex I - 1.5.2).

10 - 150 mL Membrane Desalting Buffer MEM

Directive 1999/45/EC

Symbols:



F

R 11

Highly flammable.

S 16-7

Keep away from sources of ignition — No smoking. Keep container tightly closed.

CLP Directive 1272/2008/EC

GHS pictograms:



GHS02

Signal word: DANGER

H225

Highly flammable liquid and vapour.

P210, P233, P370+378, P403+235

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. In case of fire: Use all extinguisher media to extinguish. Store in a well-ventilated place. Keep cool.

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**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****10 - 150 mL Membrane Desalting Buffer MEM**Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

Concentration: 1 - <10 %

Formula: CH₆ ClN₃

Pseudonym: guanidinium chloride

REACH Reg. No.: ---

REACH Preregistration (for): 05-2114282045-53-0000 (2018)

EC No.: 200-002-3

Indice No.: 607-148-00-0

RTECS: MF4300000

MFCD: 00013026

TSCA Inventory: listed

KE No.: KE-18111

acc. 1999/45/EC: -

acc. CLP (GHS): not necessary

Chemical:	ethanol (denatured with MEK, acc. 3199/93/EC)	CAS No.:	64-17-5
Concentration:	55 - <75 %		
Formula:	C ₂ H ₆ O		
Pseudonym:	ethyl alcohol, methylated spirit		
REACH Reg. No.:	01-2119457610-43-xxxx		
EC No.:	200-578-6	Indice No.:	603-002-00-5
RTECS:	KQ6300000	MFCD:	00003568
TSCA Inventory:	listed		
KE No.:	KE-13217		
acc. 1999/45/EC:	R 11	acc. CLP (GHS):	H225

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 for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

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

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions.

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

DANGER: Highly flammable (GHS regulation). Forms explosive vapour-air mixtures. Formation of hazardous and caustic vapour-air mixtures possible.

5.3 Advice for firefighters

No, for listed product. The substance/mixture is highly flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting.

5.4 Additional Information

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. Keep product away from sources of ignition - No smoking. 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. Use only in well-ventilated working areas.

7.2 Conditions for safe storage, including any incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage. Classification into storage class A.

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, and store in a well-ventilated place at max. 25 °C, away or preferably separate from substances with which a hazardous reaction could take place. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

10 - 150 mL Membrane Desalting Buffer MEM

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

NIOSH: not listed

OSHA: not listed

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: 950_{inh-sys} mg/m³

DNEL = Derived No-Effect Level (for workers)

TRGS 900 (DE): 500 mL/m³ / 960 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: 500 ppm / 960 mg/m³

NIOSH: TWA 1000 ppm / 1900 mg/m³

OSHA: TWA 1000 ppm / 1900 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 (f.ex. from Ansell or KCL).

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.

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****10 - 150 mL Membrane Desalting Buffer MEM**

Appearance: liquid

Color: colourless

Odor: alcoholic

Flash point:

22 °C

9.2 Other information**Relevant Properties of Substance Group**

Substances are very volatile and form flammable vapour-air mixtures. ---

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. But avoid reactions with oxidizing agents. Note: Can form very reactive substances with oxidizing agents.

10.4 Conditions to avoid

Not necessary. Or when indicated in packing insert. But can form explosive gases/vapour with air. Use only in a well-ventilated working areas.

10.5 Incompatible materials

Avoid storage with oxidising substances.

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.

10 - 150 mL Membrane Desalting Buffer MEM

Chemical:	<i>guanidine hydrochloride</i>	CAS No.:	50-01-1
TSCA Inventory:	listed	California Proposition 65 List:	not listed
Australia NICNAS:	not listed	Canada CEPA 1999:	DSL yes
Japan CSCL/PRTR:	not listed		
Japan PDSCL:	not listed	Japan ISHL:	not listed
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-18111		
LD50 _{orl rat} :	475 mg/kg		
LC50 _{ihl rat} :	5.3 _{4h} mg/m ³		
LD50 _{drm rbt} :	>2000 mg/kg		

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5
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	Canada CEPA 1999:	DSL yes
Japan CSCL/PRTR:	not listed		
Japan PDSCL:	not listed	Japan ISHL:	listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-13217		
LD50 _{orl rat} :	6200 mg/kg		
LC _{Lowihl} gpg :	21.9 g/m ³		

LC ₅₀ LowOrl hmn :	1400 mg/kg
LC ₅₀ ihl mouse :	394h g/m ³
LC ₅₀ ihl rat :	2010h g/m ³
LD ₅₀ drm rbt :	20 000 mg/kg
LD ₅₀ oral mouse :	3450 mg/kg
TRGS 905 (DE):	K5, M5, R _F C

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

10 - 150 mL Membrane Desalting Buffer MEM

Chemical:	<i>guanidine hydrochloride</i>	CAS No.: 50-01-1
LC ₅₀ leuciscus idus/96h :	1759 mg/L	
WGK (DE):	1	WGK No.: 0788
Storage class (VCI):	12	

Chemical:	<i>ethanol</i>	CAS No.: 64-17-5
PNEC(fresh water) :	0.96 mg/L	
PNEC = Predicted No Effect Concentration		
LC ₅₀ daphnia magna/48h :	>100 mg/L	
LC ₅₀ pimephales promelas/96h :	13400 - 15100 mg/L	
LC ₅₀ leuciscus idus/96h :	8140 _{48h} mg/L	
LC ₅₀ fish/96h :	13 g/L	
EC ₅₀ daphnia/48h :	9.3-14.2 g/L	
IC ₅₀ scenedesmus quadricauda/72h :	5000 _{7d} mg/L	
EC ₁₀ pseudomonas putida/16h :	EC ₅ : 6500 mg/L	
WGK (DE):	1	WGK No.: 0096
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). Or collect in solvent waste (waste code number 07 07 04).

13.1 Waste treatment methods

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

SECTION 14: Transport information

14.1 UN number:	1993	14.2 UN proper shipping name:	Flammable liquid, n.o.s. (ethanol mixture)
14.3 Class:	3	14.4 Packing group:	II
<i>Road transport</i>			
Classification code:	F1		
Limited Quantity:	1 L	Tunnel restriction code:	E
Excepted Quantity:	E 2	Special instructions:	640C
<i>Air transport</i>			
PAX:	353	max. weight PAX:	5 L
CAO:	364	max. weight CAO:	60 L

Maritime transport

EmS:

F-E, S-E

Storage category: B

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

R11 Highly flammable.

16.1.2 List of relevant H phrases

H225 Highly flammable liquid and vapour.

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.
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

Multiple safety training of staffs about danger and protection by using hazards in working area.

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

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

Directive 1999/92/EC Minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres

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 - 30 mL Reaction Buffer for DNase I RDN
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

Meridian Bioscience / 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@meridianlifescience.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 - 30 mL Reaction Buffer for DNase I RDN**

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 - 30 mL Reaction Buffer for DNase I RDN**

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 - 30 mL Reaction Buffer for DNase I RDN

Chemical: *chemicals/mixture < 2%, not hazardous*

CAS No.: -

Concentration: 1 - <2 %

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 of MACHEREY-NAGEL 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 - 30 mL Reaction Buffer for DNase I RDN

Chemical: *chemicals/mixture < 2%, not hazardous*

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

5 - 30 mL Reaction Buffer for DNase I RDN

Appearance: liquid Color: colourless Odor: odorless

pH: 6.5-7.5

Specific gravity: 1.01 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 - 30 mL Reaction Buffer for DNase I RDN

Chemical: *chemicals/mixture < 2%, not hazardous*

CAS No.: -

Korea Exist.Chem.Inventory: listed

SECTION 12: Ecological information**12.1 Toxicity**

Following information is valid for pure substances.

5 - 30 mL Reaction Buffer for DNase I RDN

Chemical: *chemicals/mixture < 2%, not hazardous*

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 UN number: 1993 **14.2 UN proper shipping name:** Flammable liquid, n.o.s. (... mixture)

14.3 Class: 3 **14.4 Packing group:** III

Road transport

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Tunnel restriction code: E

Special instructions: 640E

Air transport

PAX: 355

max. weight PAX: 60 L

CAO: 366

max. weight CAO: 220 L

Maritime transport

EmS: F-E, S-E

Storage category: A

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.

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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: 1 - 5 x 80 U, Size C, RNase-free DNase I (Iyo)
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

Meridian Bioscience / 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@meridianlifescience.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 (Iyo)

Directive 1999/45/EC

Symbols

R 42/43



Xn

CLP Directive 1272/2008/EC

GHS pictograms



GHS07

GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H317

Skin Sensitisation cat. 1A/1B

H334

Respiratory Sensitisation cat. 1A/1B

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 identifier (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.

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

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 (Iyo)**Chemical: *rDNase*

CAS No.: 9003-98-9

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

acc. 1999/45/EC: R 42/43

acc. CLP (GHS): H317, H334

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.

Storage class (VCI): 13
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

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

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 (Iyo)

Appearance: solid (Iyoph.)

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 (Iyo)

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 (Iyo)

Chemical: *rDNase*

CAS No.: 9003-98-9

WGK (DE): 1 WGK No.: n.n.

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.

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

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)