

# Safety Data Sheet

according to Regulations 1907/2006/EC (REACH) and 2015/830/EU

REF: 740210.20

NucleoSpin RNA Blood Midi (20)

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Date of issue: 12.04.2021

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

### 1.1 Product identifier

REF 740210.20  
Product name NucleoSpin RNA Blood Midi (20)

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 x 50 mL DL  
1 x 7 mL DRB (OEM)  
1 x 800 µL Liquid Proteinase K  
1 x 50 mL MDB  
1 x 13 mL RB2  
1 x 25 mL RB3  
2 x 200 U rDNase "D" (lyo)  
1 x 13 mL RNase-free H<sub>2</sub>O

### 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

#### Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG  
Valenciener Str. 11, 52355 Düren, GERMANY  
Tel.: +49 2421 969 0

E-mail: [sds@mn-net.com](mailto:sds@mn-net.com) ([msds@mn-net.com](mailto:msds@mn-net.com))

### 1.4 Emergency telephone number

Outside Germany (DE): Call your regional Poisons Information Service or call local Life Saving Service.  
DE: Gemeinsames Giftinformationszentrum (GGIZ) 99089 Erfurt tel. +49 361 730 730

You find our current versions of SDS (22 languages) in Internet:

<http://www.mn-net.com/SDS>

## SECTION 2: Hazard identification

### 2.0 Classification of the complete product



GHS02 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H334	Resp. Sens. 1
H412	Aquatic Chronic 3

### 2.1 Classification of the substance or mixture

50 mL DL

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GHS07

Signal word

WARNING

**Hazard identification**

**Hazard classes/categories**

H302  
H412

Acute Tox. 4 oral  
Aquatic Chronic 3

**7 mL DRB (OEM)**

Signal word

Do not need labelling as hazardous  
-

No hazard class

**800 µL Liquid Proteinase K**

Signal word

Do not need labelling as hazardous  
-

No hazard class

**50 mL MDB**



GHS02

Signal word

WARNING

**Hazard identification**

**Hazard classes/categories**

H226

Flam. Liq. 3

**13 mL RB2**



GHS02



GHS07

Signal word

WARNING

**Hazard identification**

**Hazard classes/categories**

H226  
H302

Flam. Liq. 3  
Acute Tox. 4 oral

**25 mL RB3**

Signal word

Do not need labelling as hazardous  
-

No hazard class

**200 U rDNase "D" (Iyo)**

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GHS08

Signal word

DANGER

## Hazard identification

## Hazard classes/categories

H334

Resp. Sens. 1

### 13 mL RNase-free H<sub>2</sub>O

Signal word

Do not need labelling as hazardous

No hazard class

-

## 2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identifier(s) (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). This labelling exemption is NOT valid for sensibilizing substances.

### 50 mL DL



GHS07

Signal word: WARNING

H412

Harmful to aquatic life with long lasting effects.

### 7 mL DRB (OEM)

Do not need labelling as hazardous

Signal word: -

### 800 µL Liquid Proteinase K

Do not need labelling as hazardous

Signal word: -

### 50 mL MDB



GHS02

Signal word: WARNING

### 13 mL RB2



GHS02



GHS07

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Signal word: WARNING

## 25 mL RB3

Do not need labelling as hazardous

Signal word: -

## 200 U rDNase "D" (Iyo)



GHS08

Signal word: DANGER

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

P261sh, P342+311

Avoid breathing dust/vapours. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

## 13 mL RNase-free H<sub>2</sub>O

Do not need labelling as hazardous

Signal word: -

## 2.3 Other hazards

### Possible hazards from physicochemical properties

Flammable properties. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.). ---

### Information pertaining to particular risks to human and possible symptoms

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

Kit contains small amounts of enzymes: May cause allergy or asthma symptoms or breathing difficulties if inhaled. In liquid form no hazard H334. -

### Information pertaining to particular risks to the environment

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

**PBT:** not applicable

**vPvB:** not applicable

### Other hazards

---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances or 3.2 Mixtures

#### 50 mL DL

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H332, Acute Tox. 4 inh.,

H412, Aquatic Chronic 3

Formula: C<sub>2</sub>H<sub>6</sub>N<sub>4</sub>S

Pseudonym: guanidine rhodanide

TSCA Inventory: listed

REACH Reg. No.: 01-2120735072-65-0001

EC No.: 209-812-1

Indice No.: 615-004-00-3

RTECS: XL1225000

MFCD: 00013027

KE No.: not listed

Concentration: 30 - <45 %

acc. CLP (GHS): H302, Acute Tox. 4 oral, H412, Aquatic Chronic 3

#### 7 mL DRB (OEM)

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Chemical: *chemicals/mixture < 2%* CAS No.: -  
 Classification: No criteria for classification or naming of chemical not required.  
 TSCA Inventory: all listed, <2%  
 KE No.: listed  
 Concentration: 1 - <2 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**800 µL Liquid Proteinase K**

Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-6I  
 Classification: H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1  
 Formula: Enzyme Comm. No. 3.4.21.64, origin: tritirachium album  
 TSCA Inventory: listed (CAS 102925-54-2)  
 EC No.: 254-457-8 Index No.: 647-014-00-9  
 RTECS: - MFCD: 00132129  
 KE No.: not listed  
 Concentration: 1 - <3 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *glycerole* CAS No.: 56-81-5  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: C<sub>3</sub> H<sub>8</sub> O<sub>3</sub>  
 Pseudonym: glycerin, 1,2,3-propanetriol  
 TSCA Inventory: listed (1,2,3-Propanetriol)  
 REACH Reg. No.: 01-2119471987-18-xxxx  
 EC No.: 200-289-5 Index No.: n/a  
 RTECS: MA8050000 MFCD: 00004722  
 KE No.: KE-29297  
 Concentration: 50 - <80 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

**50 mL MDB**

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
 Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3  
 Formula: C<sub>2</sub> H<sub>6</sub> N<sub>4</sub> S  
 Pseudonym: guanidine rhodanide  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2120735072-65-0001  
 EC No.: 209-812-1 Index No.: 615-004-00-3  
 RTECS: XL1225000 MFCD: 00013027  
 KE No.: not listed  
 Concentration: 5 - <10 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *ethanol (diluted < 20 %)* CAS No.: 64-17-5d  
 (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)  
 Classification: H225, Flam. Liq. 2  
 Formula: C<sub>2</sub> H<sub>6</sub> O; C<sub>2</sub> H<sub>5</sub> OH  
 Pseudonym: ethyl alcohol, methylated spirit  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457610-43-xxxx  
 EC No.: 200-578-6 Index No.: 603-002-00-5  
 RTECS: KQ6300000 MFCD: 00003568  
 KE No.: KE-13217  
 Concentration: 5 - <20 %  
 acc. CLP (GHS): H226, Flam. Liq. 3

**13 mL RB2**



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Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Formula: CH<sub>6</sub>ClN<sub>3</sub>  
 Pseudonym: guanidinium chloride  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119977063-35-0005  
 EC No.: 200-002-3  
 RTECS: MF4300000  
 KE No.: KE-18111  
 Concentration: 24 - <36 %  
 acc. CLP (GHS): H302, Acute Tox. 4 oral

Indice No.: 607-148-00-0  
 MFCD: 00013026

Chemical: *ethanol* CAS No.: 64-17-5  
 (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)  
 Classification: H225, Flam. Liq. 2  
 Formula: C<sub>2</sub>H<sub>6</sub>O; C<sub>2</sub>H<sub>5</sub>OH  
 Pseudonym: ethyl alcohol, methylated spirit  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119457610-43-xxxx  
 EC No.: 200-578-6  
 RTECS: KQ6300000  
 KE No.: KE-13217  
 Concentration: 20 - <35 %  
 acc. CLP (GHS): H226, Flam. Liq. 3

Indice No.: 603-002-00-5  
 MFCD: 00003568

### 25 mL RB3

Chemical: *chemicals/mixture < 1%*  
 Classification: No criteria for classification or naming of chemical not required.  
 TSCA Inventory: all listed, <1%  
 KE No.: listed  
 Concentration: 0.1 - <1 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

CAS No.: -

### 200 U rDNase "D" (Iyo)

Chemical: *rDNase*  
 Classification: H334, Resp. Sens. 1  
 Formula: Enzyme Comm. No. 3.1.21.1, origin: cloned  
 Pseudonym: Nuclease, deoxyribo-  
 TSCA Inventory: listed  
 EC No.: 232-667-0  
 RTECS: RF0750000  
 KE No.: KE-09612  
 Concentration: 90 - <100 %  
 acc. CLP (GHS): H334, Resp. Sens. 1

CAS No.: 9003-98-9

### 13 mL RNase-free H<sub>2</sub>O

Chemical: *water*  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: H<sub>2</sub>O  
 TSCA Inventory: listed  
 REACH Reg. No.: exempt, Annex IV  
 EC No.: 231-791-2  
 RTECS: ZC0110000  
 KE No.: KE-35400  
 Concentration: 90 - <100 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

CAS No.: 7732-18-5

## 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of H and P phrases: see section 16.1

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## 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. 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. 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. ---

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

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

WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. 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

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapours. 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, contains only small amounts of these substances

### 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

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## 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.

Storage class (VCI): 3  
Water hazard class (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

#### 50 mL DL

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 42.4 µg/L  
PNEC = Predicted No Effect Concentration

NIOSH: not listed  
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

#### 7 mL DRB (OEM)

Chemical: *chemicals/mixture < 2%* CAS No.: -

#### 800 µL Liquid Proteinase K

Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-61

SUVA(CH) MAK value: 0,00006<sub>15min</sub> mg/m<sup>3</sup>

Chemical: *glycerole* CAS No.: 56-81-5

DNEL: [inh] 56 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.885 mg/L  
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 E mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 2 (I), Y  
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 50 e\* mg/m<sup>3</sup>

#### 50 mL MDB

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 42.4 µg/L  
PNEC = Predicted No Effect Concentration

NIOSH: not listed  
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

Chemical: *ethanol* CAS No.: 64-17-5d

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>  
DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 ppm / 380 mg/m<sup>3</sup>  
E/e respirable

Short-term exposure factor: 4 (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/m<sup>3</sup>



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NIOSH: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>  
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period  
 OSHA: 1000 ppm / 1900 mg/m<sup>3</sup>

**13 mL RB2**

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1

DNEL: [inh] 3.5 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: -  
 PNEC = Predicted No Effect Concentration

NIOSH: not listed  
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

Chemical: *ethanol* CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L  
 PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m<sup>3</sup> / 380 mg/m<sup>3</sup>  
 E/e respirable

Short-term exposure factor: 4 (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/m<sup>3</sup>

NIOSH: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>  
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>

**25 mL RB3**

Chemical: *chemicals/mixture < 1%* CAS No.: -

**200 U rDNase "D" (Iyo)**

Chemical: *rDNase* CAS No.: 9003-98-9

**13 mL RNase-free H<sub>2</sub>O**

Chemical: *water* CAS No.: 7732-18-5

## 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**

Use for open access of these substances for example a protection filter, class A/AX. No additional recommendations.

**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

**50 mL DL**

Appearance: liquid

Colour: colourless

Odor: odorless

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## 7 mL DRB (OEM)

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	6.5-7.5	
Specific gravity:	1.01 g/cm <sup>3</sup>	

## 800 µL Liquid Proteinase K

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7-8	
Specific gravity:	1.1 g/cm <sup>3</sup>	
Solubility in water:	0-100 %	

## 50 mL MDB

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	6.7-7.2	
Flash point:	55 °C	
Specific gravity:	1.01 g/cm <sup>3</sup>	

## 13 mL RB2

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	6.5-7.5	
Flash point:	28 °C	

## 25 mL RB3

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7-8	
Specific gravity:	1.00 g/cm <sup>3</sup>	

## 200 U rDNase "D" (lyo)

Appearance: solid (lyoph.)	Colour: white	Odor: odorless
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## 13 mL RNase-free H<sub>2</sub>O

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	6-8	
Specific gravity:	1.0 g/cm <sup>3</sup>	

## 9.2 Other information

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

### Relevant Properties of Substance Group

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no further data available.

### 10.2 Chemical stability

No known instability.

### 10.3 Possibility of hazardous reactions

Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas. No further data available.

### 10.4 Conditions to avoid

Not necessary. ---

### 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.

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## 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.

#### 50 mL DL

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 <sub>orl rat</sub> :	593 mg/kg		
LC50 <sub>drm rbt</sub> :	>2000 mg/m <sup>3</sup>		
LC50 <sub>ihl rat</sub> :	[4h] 5.319 mg/L		
LD50 <sub>ipr mus</sub> :	300 mg/kg		

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

#### 7 mL DRB (OEM)

Chemical:	<i>chemicals/mixture &lt; 2%</i>	CAS No.:	-
TSCA Inventory:	all listed, <2%		
Korea Exist.Chem.Inventory:	listed		

#### 800 µL Liquid Proteinase K

Chemical:	<i>proteinase K, liquid (origin: tritirachium album)</i>	CAS No.:	39450-01-6l
TSCA Inventory:	listed (CAS 102925-54-2)		
Japan CSCL/PRTR:	not listed		
Japan ISHL:	not listed		
Korea Exist.Chem.Inventory:	not listed		

Chemical:	<i>glycerole</i>	CAS No.:	56-81-5
TSCA Inventory:	listed (1,2,3-Propanetriol)		
Exposure Routes:	inhalation, skin and/or eye contact		
Target Organs:	Eyes, skin, respiratory system, kidneys		
Symptoms:	irritation eyes, skin, respiratory system; headache, nausea, vomiting; kidney injury		
Japan CSCL/PRTR:	not listed, Japan PDSCL:		not listed
Japan ISHL:	not listed		
Korea Exist.Chem.Inventory:	KE-29297		
LD50 <sub>orl rat</sub> :	12.6 g/kg		
LD50 <sub>drm rbt</sub> :	>18.7 g/kg		

TRGS 905 (DE): R<sub>F</sub> C

#### 50 mL MDB

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 <sub>orl rat</sub> :	593 mg/kg		
LC50 <sub>drm rbt</sub> :	>2000 mg/m <sup>3</sup>		
LC50 <sub>ihl rat</sub> :	[4h] 5.319 mg/L		
LD50 <sub>ipr mus</sub> :	300 mg/kg		

Chemical:	<i>ethanol</i>	CAS No.:	64-17-5d
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		

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Australia NICNAS:	not listed	Canada CEPA 1999:	DSL yes
Japan CSCL/PRTR:	not listed, Japan PDSCL: not listed		
Japan ISHL:	listed $\geq 0,1\%$ / $\geq 0,1\%$ , Article 57-2 (SDS required)		
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-13217		
LD50 <sub>orl rat</sub> :	6200 mg/kg		
LC <sub>LoWi</sub> hl gpg:	21.9 g/m <sup>3</sup>		
LC <sub>LoWo</sub> rl hmn:	1400 mg/kg		
LC50 <sub>ihl mouse</sub> :	[4h] 39 g/m <sup>3</sup>		
LC50 <sub>ihl rat</sub> :	[10h] 20 g/m <sup>3</sup>		
LD50 <sub>drm rbt</sub> :	20 000 mg/kg		
LD50 <sub>oral mouse</sub> :	3450 mg/kg		
TRGS 905 (DE):	K5, M5, R <sub>F</sub> C		

## 13 mL RB2

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 <sub>orl rat</sub> :	475-907 mg/kg		
LC50 <sub>ihl rat</sub> :	[4h] 3181-7655 $\mu\text{g}/\text{m}^3$		
LD50 <sub>drm rbt</sub> :	2000 mg/kg		
Acute Effects:	Cause after oral intake, impairments of health when ingested in small quantities.		

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 $\geq 0,1\%$ / $\geq 0,1\%$ , Article 57-2 (SDS required)		
South Korea TCCA:	not listed		
Korea Exist.Chem.Inventory:	KE-13217		
LD50 <sub>orl rat</sub> :	6200 mg/kg		
LC <sub>LoWi</sub> hl gpg:	21.9 g/m <sup>3</sup>		
LC <sub>LoWo</sub> rl hmn:	1400 mg/kg		
LC50 <sub>ihl mouse</sub> :	[4h] 39 g/m <sup>3</sup>		
LC50 <sub>ihl rat</sub> :	[10h] 20 g/m <sup>3</sup>		
LD50 <sub>drm rbt</sub> :	20 000 mg/kg		
LD50 <sub>oral mouse</sub> :	3450 mg/kg		
TRGS 905 (DE):	K5, M5, R <sub>F</sub> C		

## 25 mL RB3

Chemical:	<i>chemicals/mixture &lt; 1%</i>	CAS No.:	-
TSCA Inventory:	all listed, <1%		
Korea Exist.Chem.Inventory:	listed		

## 200 U rDNase "D" (Iyo)

Chemical:	<i>rDNase</i>	CAS No.:	9003-98-9
TSCA Inventory:	listed		
Japan CSCL/PRTR:	not listed		
Japan ISHL:	not listed		
Korea Exist.Chem.Inventory:	KE-09612		
Acute Effects:	Cause after 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.		

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## 13 mL RNase-free H<sub>2</sub>O

Chemical: *water*  
 TSCA Inventory: listed  
 Korea Exist.Chem.Inventory: KE-35400

CAS No.: 7732-18-5

## SECTION 12: Ecological information

### 12.1 Toxicity

Following information is valid for pure substances.

#### 50 mL DL

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 (EU 1272/2008 Annex I - 1.5.2).  
 PNEC(fresh water) : 42.4 µg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>fish/96h</sub> : [4d] 89.1 mg/L  
 EC50<sub>daphnia/48h</sub> : 42.4 mg/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : 130 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : [10d] 200 mg/L  
 Water hazard class (DE): 3  
 Dispersion coefficient<sub>(octanol-water)</sub> : [pH 5.1] -1.11  
 Storage class (VCI): 12

#### 7 mL DRB (OEM)

Chemical: *chemicals/mixture < 2%* CAS No.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

#### 800 µL Liquid Proteinase K

Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-61  
 Water hazard class (DE): 1  
 Storage class (VCI): 13

Chemical: *glycerole* CAS No.: 56-81-5  
 PNEC(fresh water) : 0.885 mg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>fish/96h</sub> : >5000<sub>24h</sub> mg/L  
 EC50<sub>daphnia/48h</sub> : >10<sub>24h</sub> g/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : IC50<sub>7d</sub> >10 g/L  
 EC10<sub>pseudomonas putita/16h</sub> : EC5: >10 g/L  
 Water hazard class (DE): 0  
 Dispersion coefficient<sub>(octanol-water)</sub> : -1.76  
 Storage class (VCI): 10

#### 50 mL MDB

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
 PNEC(fresh water) : 42.4 µg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>fish/96h</sub> : [4d] 89.1 mg/L  
 EC50<sub>daphnia/48h</sub> : 42.4 mg/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : 130 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : [10d] 200 mg/L  
 Water hazard class (DE): 3  
 Dispersion coefficient<sub>(octanol-water)</sub> : [pH 5.1] -1.11  
 Storage class (VCI): 12

Chemical: *ethanol* CAS No.: 64-17-5d  
 PNEC(fresh water) : 0.96 mg/L  
 PNEC = Predicted No Effect Concentration  
 LC50<sub>daphnia magna/48h</sub> : >100 g/L  
 LC50<sub>pimephales promelas/96h</sub> : 13.4-15.1 g/L  
 LC50<sub>leuciscus idus/96h</sub> : [48h] 8.14 g/L  
 LC50<sub>fish/96h</sub> : 13 g/L  
 EC50<sub>daphnia/48h</sub> : 9.3-14.2 g/L

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IC50scenedesmus quadricauda/72h : [7d] 5000 mg/L  
 EC10pseudomonas putita/16h : [EC5] 6500 mg/L  
 Water hazard class (DE): 1 WGK No.: 0096  
 Dispersion coefficient(octanol-water) : -0.31  
 Storage class (VCI): 3

**13 mL RB2**

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 PNEC(fresh water) : -  
 PNEC = Predicted No Effected Concentration  
 LC50leuciscus idus/96h : 1759 mg/L  
 LC50fish/96h : [4d] 690-1850; [48h] 1758-2420 mg/L  
 EC50daphnia/48h : 70.2 mg/L  
 EC10pseudomonas putita/16h : [72h] 11.8-33.5 mg/L  
 Water hazard class (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 Effected Concentration  
 LC50daphnia magna/48h : >100 mg/L  
 LC50pimephales promelas/96h : 13400 - 15100 mg/L  
 LC50leuciscus idus/96h : [48h] 8140 mg/L  
 LC50fish/96h : 13 g/L  
 EC50daphnia/48h : 9.3-14.2 g/L  
 IC50scenedesmus quadricauda/72h : [7d] 5000 mg/L  
 EC10pseudomonas putita/16h : [EC5] 6500 mg/L  
 Water hazard class (DE): 1 WGK No.: 0096  
 Dispersion coefficient(octanol-water) : -0.31  
 Storage class (VCI): 3

**25 mL RB3**

Chemical: *chemicals/mixture < 1%* CAS No.: -  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

**200 U rDNase "D" (Iyo)**

Chemical: *rDNase* CAS No.: 9003-98-9  
 Water hazard class (DE): 1 WGK No.: n.n.  
 Storage class (VCI): 13

**13 mL RNase-free H<sub>2</sub>O**

Chemical: *water* CAS No.: 7732-18-5

**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



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## 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

UN 1993 class 3 III, **Excepted Quantities** ( $\leq 30$  mL/ $\sum \leq 1$  L) = ADR/ IATA E1

or

**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

*Air transport*

PAX: 355

CAO: 366

*Maritime transport*

EmS: F-E, S-E

Tunnel restriction code: E

Special instructions: 640E

max. weight PAX: 60 L

max. weight CAO: 220 L

Storage category: A

### 14.5 Environmental hazards

none, 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

MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)

Look for your country-specific regulations.

### 15.2 Chemical safety assessment

not necessary for these small amounts ---

## SECTION 16: Other information

### 16.1 List of H and P phrases

#### 16.1.1 List of relevant H phrases

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412	Harmful to aquatic life with long lasting effects.

#### 16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261sh	Avoid breathing dust/vapours.
P264W	Wash with water thoroughly after handling.
P273	Avoid release to the environment.
P301+312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330	Rinse mouth.



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P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

**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 for DE §§ 11-13 MuSchG 2017)!  
 An individual package of this product or test kit has a moderate hazardous potential.

**16.4 Further information**

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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, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
 Regulation 669/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
 Regulation 1480/2018/EU, 4<sup>th</sup> adaptation of CLP regulation to technical and scientific progress  
 TRGS 900, German engineering rules governing limits in air at work, updated 03/2019  
 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)

**Revisions/Updates**

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU  
 2017-08 Adaption of new ethanol denaturation 2016/1867/EU  
 2017-11 Adaption of ECHA Registration dossier

