

# Safety Data Sheet

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

REF: 740982.10

NucleoSpin totalRNA FFPE (10)

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Printing date: 28.05.2020

Date of issue: 24.06.2019

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

### 1.1 Product identifier

REF 740982.10  
 Product name NucleoSpin totalRNA FFPE (10)

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 7 mL DRB (OEM)
- 1 x 600 µL Liquid Proteinase K
- 1 x 1 mL MKA
- 1 x 10 mL MLF
- 1 x 6 mL MW2
- 1 x 13 mL MX
- 1 x 15 mL Paraffin Dissolver (blau)
- 1 x 200 U, Size D, rDNase
- 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  
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY  
 Tel.: +49 2421 969 0  
 E-mail: sds@mn-net.com (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



Signal word	DANGER
<b>Hazard identification</b>	<b>Hazard classes/categories</b>
H225	Flam. Liq. 2
H304	Asp. Tox. 1
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H335	STOT SE 3
H351	Carc. 2

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## 2.1 Classification of the substance or mixture

### 7 mL DRB (OEM)

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 600 µL Liquid Proteinase K

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 1 mL MKA

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 10 mL MLF

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 6 mL MW2

Signal word Do not need labelling as hazardous  
-  
No hazard class

### 13 mL MX



GHS02 GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H319	Eye Irrit. 2
H335	STOT SE 3
H351	Carc. 2

### 15 mL Paraffin Dissolver (blau)



GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H304	Asp. Tox. 1

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## 200 U, Size D, rDNase



GHS08

Signal word

DANGER

### Hazard identification

H334

### Hazard classes/categories

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.

### 7 mL DRB (OEM)

Do not need labelling as hazardous

Signal word: -

### 600 µL Liquid Proteinase K

Do not need labelling as hazardous

Signal word: -

### 1 mL MKA

Do not need labelling as hazardous

Signal word: -

### 10 mL MLF

Do not need labelling as hazardous

Signal word: -

### 6 mL MW2

Do not need labelling as hazardous

Signal word: -

### 13 mL MX



GHS02



GHS07



GHS08

Signal word: DANGER

H351

Suspected of causing cancer.

P280sh

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Wear protective gloves/eye protection.

## 15 mL Paraffin Dissolver (blau)



GHS08

Signal word: DANGER

H304

May be fatal if swallowed and enters airways.

P301+310, P331

IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Do NOT induce vomiting.

## 200 U, Size D, rDNase



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

In the case of pH values are less than 5 or higher than 9 then it is irritant. Flammable properties. ---

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

Cause after inhalation of vapours/dust, 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. Suspected of causing cancer. May be fatal if swallowed and enters airways. The Paraffin Dissolver needs no labeling H350, because the aromates are reduced (<0.03%). -

### 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

#### 7 mL DRB (OEM)

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.

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### 600 µL Liquid Proteinase K

Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-6l  
 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 Indice 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 Indice No.: n/a  
 RTECS: MA8050000 MFCD: 00004722  
 KE No.: KE-29297  
 Concentration: 50 - <80 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 1 mL MKA

Chemical: *acetate buffer solution* CAS No.: -  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: CH<sub>3</sub> COOH/K/Na•H<sub>2</sub> O  
 TSCA Inventory: all listed  
 KE No.: listed  
 Concentration: 45 - <60 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 10 mL MLF

Chemical: *tris(hydroxymethyl)aminomethane* CAS No.: 77-86-1  
 Classification: No criteria for classification or naming of chemical not required.  
 Formula: C<sub>4</sub> H<sub>11</sub> NO<sub>3</sub>  
 Pseudonym: Trometamol, 2-amino-2-(hydroxymethyl)-1,3-propanediol  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119957659-16-0014  
 EC No.: 201-064-4  
 RTECS: TY2900000 MFCD: 00004679  
 KE No.: KE-01403  
 Concentration: 1 - <3 %  
 acc. CLP (GHS): The criteria for classification are not fulfilled.

### 6 mL MW2

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

### 13 mL MX

Chemical: *1,4-dioxane* CAS No.: 123-91-1  
 Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H335, STOT SE 3, H351, Carc. 2  
 Formula: C<sub>4</sub> H<sub>8</sub> O<sub>2</sub>  
 Pseudonym: diethylene dioxide; diethylene ether; p-dioxane  
 TSCA Inventory: listed  
 REACH Reg. No.: 01-2119462837-26-0001  
 EC No.: 204-661-8 Indice No.: 603-024-00-5  
 RTECS: JG8225000 MFCD: 00006571  
 KE No.: KE-10463  
 Concentration: 90 - <100 %  
 acc. CLP (GHS): H225, Flam. Liq. 2, H319, Eye Irrit. 2, H335, STOT SE 3, H351, Carc. 2

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## 15 mL Paraffin Dissolver (blau)

Chemical: *paraffin dissolver* CAS No.: 64742-46-7  
(, Aromates <0.03%)

Classification: H304, Asp. Tox. 1

Formula: C<sub>15</sub>-C<sub>20</sub>, isomere aliphates

Pseudonym: distillates (petroleum), hydrotreated middle

TSCA Inventory: listed

REACH Reg. No.: 01-2119827000-58-XXXX

EC No.: 934-956-3

Indice No.: 649-275-00-4

KE No.: KE-12554

Concentration: 90 - <100 %

acc. CLP (GHS): H304, Asp. Tox. 1

Chemical: *colour dye(s)* CAS No.: -

Classification: No criteria for classification or naming of chemical not required.

TSCA Inventory: all listed, <1%

Concentration: < 0.10 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

## 200 U, Size D, rDNase

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

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

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

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

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.

### 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

## 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. ---

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- 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.  
CMR Effects: Suspected of causing cancer. ---
- 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**  
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. 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. Wear suitable protective gloves (see 8.2.2). 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. Not for organic solvents (see section 13).
- 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.  
Storage class (VCI): 3  
Water hazard class (DE): 2
- 7.2.1 Requirements for stock rooms and containers**  
Keep original product packages tightly closed during handling and storage.
- 7.3 Specific end use(s)**  
Product for analytical use.

## SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters**  
7 mL DRB (OEM)

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

**600 µL Liquid Proteinase K**  
 Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-6l  
 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>

**1 mL MKA**  
 Chemical: *acetate buffer solution* CAS No.: -

**10 mL MLF**  
 Chemical: *tris(hydroxymethyl)aminomethane* CAS No.: 77-86-1  
 DNEL: [derm] 166.7 mg/kg bw/day; [inh] 117.5 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)  
 PNEC<sub>(fresh water)</sub>: no data mg/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

**6 mL MW2**  
 Chemical: *chemicals/mixture < 1%* CAS No.: -

**13 mL MX**  
 Chemical: *1,4-dioxane* CAS No.: 123-91-1  
 DNEL: 73 mg/m<sup>3</sup>  
 DNEL = Derived No-Effect Level (for workers)  
 PNEC<sub>(fresh water)</sub>: 10 mg/L  
 PNEC = Predicted No Effect Concentration  
 EU value: 20 ppm / 73 mg/m<sup>3</sup>  
 TRGS 900 (DE): 20 ppm / 73 mg/m<sup>3</sup>  
 E/e respirable  
 Short-term exposure factor: 2 (I), H, Y  
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded  
 SUVA(CH) MAK value: 20 ppm / 72 mg/m<sup>3</sup>  
 TRGS 903 (DE): 2-Hydroxyethoxyessigsäure U/b Kreatinin 400 mg/g  
 B blood, U urine, a no limitation, b end of exposition or shift  
 NIOSH: Occupational Carcinogen List Yes; TWA<sub>30min</sub> 1 ppm / 3.6 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: [skin] TWA 100 ppm / 360 mg/m<sup>3</sup>

**15 mL Paraffin Dissolver (blau)**  
 Chemical: *paraffin dissolver* CAS No.: 64742-46-7  
 TRGS 900 (DE): 600 mg/m<sup>3</sup>  
 E/e respirable  
 Short-term exposure factor: 2 (II)  
 skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded  
 NIOSH STEL: 10 mg/m<sup>3</sup>  
 OSHA: 5 mg/m<sup>3</sup>

Chemical: *colour dye(s)* CAS No.: -

**200 U, Size D, rDNase**





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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

#### 7 mL DRB (OEM)

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

#### 600 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 %	

#### 1 mL MKA

Appearance: liquid	Colour: colourless	Odor: acetic
pH:	5-6	
Specific gravity:	1.19 g/cm <sup>3</sup>	

#### 10 mL MLF

Appearance: liquid	Colour: colourless	Odor: odorless
Solubility in water:	0-100 %	

#### 6 mL MW2

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

#### 13 mL MX

Appearance: liquid	Colour: colourless	Odor: odorless
Odor limit:	10-620 mg/m <sup>3</sup>	
pH:	6-8	
Melting point:	12 °C	
Boiling point:	101.5 °C	
Flash point:	11 °C	
Evaporation rate <sub>(ether=1)</sub> :	7,3	
Explosion limits:	1.9-22.5 Vol%	
Vapour pressure (20°C):	41 hPa	
Vapour density <sub>(air=1)</sub> :	3,04	
Specific gravity:	1.01-1.03 g/cm <sup>3</sup>	

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Solubility in water: < 2 %  
 Flashing temperature: 375 °C  
 Volatiles by volume: 149 g/m<sup>3</sup>

### 15 mL Paraffin Dissolver (blau)

Appearance: liquid	Colour: blue	Odor: organic
pH: -		
Melting point: -18 <sub>pourpoint</sub> °C		
Boiling point: 245-330 °C		
Flash point: >115 °C		
Evaporation rate <sub>(ether=1)</sub> : >1000		
Explosion limits: 1-6 Vol%		
Vapour pressure (20°C): < 0.003 hPa		
Specific gravity: 0.82 g/cm <sup>3</sup>		
Solubility in water: <0,001 %		
Dispersion coefficient <sub>(octanol-water)</sub> : 7-8.7		
Flashing temperature: >230 °C		

### 200 U, Size D, rDNase

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

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

## 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

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.

## 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.

#### 7 mL DRB (OEM)

Chemical: *chemicals/mixture < 2%*  
 TSCA Inventory: all listed, <2%  
 Korea Exist.Chem.Inventory: listed

CAS No.: -

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## 600 µL Liquid Proteinase K

Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-61  
 TSCA Inventory: listed (CAS 102925-54-2)  
 Japan CSCL/PRTR: not listed  
 Japan ISHL: not listed  
 Korea Exist.Chem.Inventory: not listed

Chemical: *glycerole* 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

## 1 mL MKA

Chemical: *acetate buffer solution* CAS No.: -  
 TSCA Inventory: all listed  
 Korea Exist.Chem.Inventory: listed

## 10 mL MLF

Chemical: *tris(hydroxymethyl)aminomethane* CAS No.: 77-86-1  
 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-01403  
 LD50<sub>orl rat</sub>: 5000 mg/kg

## 6 mL MW2

Chemical: *chemicals/mixture < 1%* CAS No.: -  
 TSCA Inventory: all listed, <1%  
 Korea Exist.Chem.Inventory: listed

## 13 mL MX

Chemical: *1,4-dioxane* CAS No.: 123-91-1  
 TSCA Inventory: listed California Proposition 65 List: listed cancer  
 Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, liver, kidneys; [in animals: lung, liver & nasal cavity tumors]  
 Symptoms: irritation eyes, skin, nose, throat; drowsiness, headache; nausea, vomiting; liver damage; kidney failure; [potential occupational carcinogen]  
 Australia NICNAS: Yes (PEC/7) Canada CEPA 1999: DSL Yes  
 Japan CSCL/PRTR: PAC Yes, PRTR - Class I Designated Chemical Substance Yes, Japan PDSCL: PRTR: ≥1,0% class I  
 Japan ISHL: listed ≥1,0%/≥1,0%, Article 57-1+2 (Labelling&SDS required)  
 South Korea TCCA: not listed  
 Korea Exist.Chem.Inventory: KE-10463  
 LD50<sub>orl rat</sub>: 5150 mg/kg  
 LC50<sub>ihl rat</sub>: [LC0, 60min] 155 mg/L  
 Acute Effects: Cause after inhalation of vapours/dust, impairments of health when ingested in small quantities.  
 Carcinogenic Effects: Suspected of causing cancer.  
 EU carcinogen: Carcinogenicity cat. 2  
 TRGS 905 (DE): K4, R<sub>F</sub> C

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## 15 mL Paraffin Dissolver (blau)

Chemical: *paraffin dissolver*  
 TSCA Inventory: listed  
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed  
 Japan ISHL: not listed  
 Korea Exist.Chem.Inventory: KE-12554  
 LD50<sub>orl rat</sub>: >5000 mg/kg  
 LC50<sub>inh rat</sub>: >5266<sub>4h</sub> mg/m<sup>3</sup>  
 LD50<sub>drm rbt</sub>: >3160 mg/kg

CAS No.: 64742-46-7

Chemical: *colour dye(s)*  
 TSCA Inventory: all listed, <1%

CAS No.: -

## 200 U, Size D, rDNase

Chemical: *rDNase*  
 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.

CAS No.: 9003-98-9

## 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.

#### 7 mL DRB (OEM)

Chemical: *chemicals/mixture < 2%*  
 Water hazard class (DE): 1  
 Storage class (VCI): 12-13

CAS No.: -

#### 600 µL Liquid Proteinase K

Chemical: *proteinase K, liquid (origin: tritirachium album)*  
 Water hazard class (DE): 1  
 Storage class (VCI): 13

CAS No.: 39450-01-6l

Chemical: *glycerole*  
 PNEC<sub>(fresh water)</sub>: 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 putida/16h</sub>: EC5: >10 g/L  
 Water hazard class (DE): 0  
 Dispersion coefficient<sub>(octanol-water)</sub>: -1.76  
 Storage class (VCI): 10

CAS No.: 56-81-5

#### 1 mL MKA

Chemical: *acetate buffer solution*  
 Storage class (VCI): 12

CAS No.: -

#### 10 mL MLF

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Chemical: *tris(hydroxymethyl)aminomethane*      CAS No.: 77-86-1  
 PNEC(fresh water) : no data mg/L  
 PNEC = Predicted No Effected Concentration  
 LC50<sub>fish/96h</sub> : LD0 (4d): 1-10 g/L  
 EC50<sub>pseudokirchneriella subcapitata/72h</sub> : 397;48h: 473 mg/L  
 EC10<sub>pseudomonas putita/16h</sub> : 13h g/L  
 Water hazard class (DE): 2  
 Dispersion coefficient(octanol-water) : -1.56  
 Storage class (VCI): 12-13

**6 mL MW2**

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

**13 mL MX**

Chemical: *1,4-dioxane*      CAS No.: 123-91-1  
 PNEC(fresh water) : 10 mg/L  
 PNEC = Predicted No Effected Concentration  
 Bio Toxicity: 1/2.1/2.6  
 LC50<sub>fish/96h</sub> : [21d] 100 mg/L  
 EC50<sub>daphnia/48h</sub> : 1 g/L  
 IC50<sub>scenedesmus quadricauda/72h</sub> : [72h] 1 g/L  
 Water hazard class (DE): 2      WGK No.: 0086  
 Dispersion coefficient(octanol-water) : -0.42  
 Storage class (VCI): 3

**15 mL Paraffin Dissolver (blau)**

Chemical: *paraffin dissolver*      CAS No.: 64742-46-7  
 LC50<sub>fish/96h</sub> : >1028 mg/L  
 Water hazard class (DE): 1      WGK No.: 0027  
 Dispersion coefficient(octanol-water) : 7-8.7  
 Storage class (VCI): 12

Chemical: *colour dye(s)*      CAS No.: -

**200 U, Size D, rDNase**

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

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

UN 1993 class 3 II, **Excepted Quantities** ( $\leq 30$  mL/ $\Sigma \leq 500$  mL) = ADR/ IATA E2

or

**14.1 UN number:** 1993 **14.2 UN proper shipping name:** Flammable liquid, n.o.s. (1,4-dioxane mixture)

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

*Road transport*

Classification code: F1

Limited Quantity: 1 L

Excepted Quantity: E 2

*Air transport*

PAX: 353

CAO: 364

*Maritime transport*

EmS: F-E, S-E

Tunnel restriction code: E

Special instructions: 640C

max. weight PAX: 5 L

max. weight CAO: 60 L

Storage category: B

### 14.5 Environmental hazards

none, 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

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

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.

#### 16.1.2 List of relevant P phrases

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P261sh	Avoid breathing dust/vapours.
P280sh	Wear protective gloves/eye protection.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P331 Do NOT induce vomiting.  
 P342+311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P403+233 Store in a well-ventilated place. Keep container tightly closed.

## 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