Safety Data Sheet

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

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

1.1 Product identifier

REF 740300.10
Product name NucleoSnap cfDNA (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 13 mL CC
1 x 13 mL Elution Buffer
1 x 800 µL Liquid Proteinase K
1 x 60 mL VL
1 x 13 mL VW1
1 x 10 mL WB

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
Valencienner Str. 11, 52355 Düren, 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

GHS02 GHS07

Signal word DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H226	Flam. Liq. 3
H290	Met. Corr. 1
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H336	STOT SE 3

2.1 Classification of the substance or mixture

13 mL CC

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H290	Met. Corr. 1
H315	Skin Irrit. 2
H319	Eye Irrit. 2

13 mL Elution Buffer

Do not need labelling as hazardous

Signal word -

No hazard class

800 µL Liquid Proteinase K

Do not need labelling as hazardous

Signal word -

No hazard class

60 mL VL

GHS07

Signal word WARNING

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

13 mL VW1

GHS02 GHS07

Signal word WARNING

Hazard identification	Hazard classes/categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H319	Eye Irrit. 2
H336	STOT SE 3

10 mL WB

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com

CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com

FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com

US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

GHS02

Signal word	DANGER

Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2

2.2 Label elements

According **CLP directive** inner packages must be only labelled with GHS symbol(s) and product identificator(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).
Metal corrosive solutions**do not have to** be labelled with GHS symbol, signal word, H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2.1.3).
The irritant hazard should be eliminated, because of buffer chemicals inside.

13 mL CC

GHS07

Signal word: WARNING

13 mL Elution Buffer

Do not need labelling as hazardous
Signal word: -

800 µL Liquid Proteinase K

Do not need labelling as hazardous
Signal word: -

60 mL VL

GHS07

Signal word: WARNING

13 mL VW1

GHS02 GHS07

Signal word: WARNING

10 mL WB

GHS02

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

Signal word: DANGER

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 oral intake, impairments of health when ingested in small quantities.
Kit contains small amounts of enzymes: In liquid form no hazard H334. ---

Information pertaining to particular risks to the environment
---

Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

13 mL CC

Chemical:	*potassium hydroxide solution*		CAS No.: 1310-58-3
Classification:	H290, Met. Corr. 1, H302, Acute Tox. 4 oral, H314, Skin Corr. 1B		
Formula:	$KOH•H_2O$		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119487136-33-xxxx		
EC No.:	215-181-3	Indice No.:	019-002-00-8
RTECS:	TT2100000		
KE No.:	KE-29139, >5% Toxic 97-1-137		
Concentration:	0.5 - <1 %		
acc. CLP (GHS):	H290, Met. Corr. 1, H315, Skin Irrit. 2, H319, Eye Irrit. 2		

13 mL Elution Buffer

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.		

800 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:	$C_3H_8O_3$		
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.		

60 mL VL

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: CH_6ClN_3
Pseudonym: guanidinium chloride
TSCA Inventory: listed
REACH Reg. No.: 01-2119977063-35-0005
EC No.: 200-002-3 Indice No.: 607-148-00-0
RTECS: MF4300000 MFCD: 00013026
KE No.: KE-18111
Concentration: 50 - <66 %
acc. CLP (GHS): H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

13 mL VW1

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2
Formula: CH_6ClN_3
Pseudonym: guanidinium chloride
TSCA Inventory: listed
REACH Reg. No.: 01-2119977063-35-0005
EC No.: 200-002-3 Indice No.: 607-148-00-0
RTECS: MF4300000 MFCD: 00013026
KE No.: KE-18111
Concentration: 36 - <50 %
acc. CLP (GHS): H302, Acute Tox. 4 oral, H319, Eye Irrit. 2

Chemical: *2-propanol* CAS No.: 67-63-0
Classification: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3
Formula: C_3H_8O
Pseudonym: isopropanol, IPA, propan-2-ol
TSCA Inventory: listed
REACH Reg. No.: 01-2119457558-25-XXXX
EC No.: 200-661-7 Indice No.: 603-117-00-0
RTECS: NT8050000 MFCD: 00011674
KE No.: KE-29363
Concentration: 20 - <35 %
acc. CLP (GHS): H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

10 mL WB

Chemical: *ethanol* CAS No.: 64-17-5
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)
Classification: H225, Flam. Liq. 2
Formula: C_2H_6O; C_2H_5OH
Pseudonym: ethyl alcohol, methylated spirit
TSCA Inventory: listed
REACH Reg. No.: 01-2119457610-43-xxxx
EC No.: 200-578-6 Indice No.: 603-002-00-5
RTECS: KQ6300000 MFCD: 00003568
KE No.: KE-13217
Concentration: 55 - <75 %
acc. CLP (GHS): H225, Flam. Liq. 2

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.

4.1.1 After SKIN Contact

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

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

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

WARNING: Flammable (GHS regulation). May form explosive vapour-air mixtures. 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. 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 (VCI): 3
Water hazard class (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.

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

13 mL CC
Chemical: *potassium hydroxide solution* CAS No.: 1310-58-3
DNEL: 1_{inh} mg/m³
DNEL = Derived No-Effect Level (for workers)
SUVA(CH) MAK value: 2 e mg/m³
NIOSH: C 2 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: none

13 mL Elution Buffer
Chemical: *chemicals/mixture < 1%* CAS No.: -

800 µL Liquid Proteinase K
Chemical: *proteinase K, liquid (origin: tritirachium album)* CAS No.: 39450-01-6l
SUVA(CH) MAK value: $0{,}00006_{15min}$ mg/m³

Chemical: *glycerole* CAS No.: 56-81-5
DNEL: [inh] 56 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: 0.885 mg/L
PNEC = Predicted No Effected Concentration
TRGS 900 (DE): 200 E mg/m³
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/m³

60 mL VL
Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
DNEL: [inh] 3.5 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: -
PNEC = Predicted No Effected 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

13 mL VW1
Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
DNEL: [inh] 3.5 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: -
PNEC = Predicted No Effected 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: *2-propanol* CAS No.: 67-63-0
DNEL: [inh] 500 mg/m³
DNEL = Derived No-Effect Level (for workers)
$PNEC_{(fresh\ water)}$: 140.9 mg/L
PNEC = Predicted No Effected Concentration
TRGS 900 (DE): 200 ppm / 500 mg/m³
E/e respirable
Short-term exposure factor: 2 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: 200 ppm / 500 mg/m³
TRGS 903 (DE): [Aceton B/b, U/b] 25 mg/L
B blood, U urine, a no limitation, b end of exposition or shift
NIOSH: [TWA] 400 ppm / 980 mg/m³
NIOSH STEL: 500 ppm / 1225 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: [TWA] 400 ppm / 980 mg/m³

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

10 mL WB
Chemical: *ethanol* CAS No.: 64-17-5
DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water) : 0.96 mg/L
PNEC = Predicted No Effected Concentration
TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
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/m³
NIOSH: [TWA] 1000 ppm / 1900 mg/m³
[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/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
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
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

13 mL CC
Appearance: liquid | Colour: colourless | Odor: odorless
pH: 13
Specific gravity: 1,005 g/cm³

13 mL Elution Buffer
Appearance: liquid | Colour: colourless | Odor: odorless
pH: 8-9
Specific gravity: 1.0 g/cm³

800 µL Liquid Proteinase K
Appearance: liquid | Colour: colourless | Odor: odorless
pH: 7-8
Specific gravity: 1.1 g/cm³
Solubility in water: 0-100 %

60 mL VL
Appearance: liquid | Colour: colourless | Odor: odorless
pH: 4.5-5.2
Specific gravity: 1.18 g/cm³

13 mL VW1
Appearance: liquid | Colour: colourless | Odor: alcoholic
pH: 7-8
Flash point: 25 °C
Specific gravity: 1.06 g/cm³

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

10 mL WB

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	7-8	
Flash point:	10 °C	
Specific gravity:	0.91 g/cm³	

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 volantile 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

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

10.4 Conditions to avoid

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.

13 mL CC

Chemical:	*potassium hydroxide solution*	CAS No.: 1310-58-3
TSCA Inventory:	listed	California Proposition 65 List: not listed
Exposure Routes:	inhalation, ingestion, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system	
Symptoms:	irritation eyes, skin, respiratory system; cough, sneezing; eye, skin burns; vomiting, diarrhea	
Australia NICNAS:	not listed	Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR:	not listed, Japan PDSCL: Deleterious Substance	
Japan ISHL:	listed ≥1,0%/≥1,0%, Article 57-2 (SDS required)	
South Korea TCCA:	not listed	
Korea Exist.Chem.Inventory:	KE-29139, >5% Toxic 97-1-137	
$LD50_{orl\ rat}$:	273	

13 mL Elution Buffer

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

800 µL Liquid Proteinase K

Chemical:	*proteinase K, liquid (origin: tritirachium album)*	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	

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international:	CH:	FR:	US:
Tel.: +49 24 21 969-0	Tel.: +41 62 388 55 00	Tel.: +33 388 68 22 68	Tel.: +1 484 821 0984
Fax: +49 24 21 969-199	Fax: +41 62 388 55 05	Fax: +33 388 51 76 88	Fax: +1 484 821 1272
E-mail: info@mn-net.com	E-mail: sales-ch@mn-net.com	E-mail: sales-fr@mn-net.com	E-mail: sales-us@mn-net.com

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
$LD50_{orl\ rat}$: 12.6 g/kg
$LD50_{drm\ rbt}$: >18.7 g/kg

TRGS 905 (DE): R_F C

60 mL VL

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
$LD50_{orl\ rat}$: 475-907 mg/kg
$LC50_{ihl\ rat}$: [4h] 3181-7655 µg/m³
$LD50_{drm\ rbt}$: 2000 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

13 mL VW1

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
$LD50_{orl\ rat}$: 475-907 mg/kg
$LC50_{ihl\ rat}$: [4h] 3181-7655 µg/m³
$LD50_{drm\ rbt}$: 2000 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *2-propanol* CAS No.: 67-63-0
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1230 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system
Symptoms: irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis
Australia NICNAS: Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: PAC yes, Japan PDSCL: -
Japan ISHL: listed ≥1,0%/≥0,1%, Article 57-2 (SDS required)
South Korea TCCA:
Korea Exist.Chem.Inventory: KE-29363
$LD50_{orl\ rat}$: 5045 mg/kg
$LC\_Low_{orl\ hmn}$: 3570 mg/kg
$LC50_{ihl\ rat}$: 16_{4h} g/m³
$LD50_{drm\ rbt}$: 12.8 g/kg

TRGS 905 (DE): R_F C

10 mL WB

Chemical: *ethanol* 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

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

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
$LC\_Low_{ihl\ gpg}$:	21.9 g/m³
$LC\_Low_{orl\ hmn}$:	1400 mg/kg
$LC50_{ihl\ mouse}$:	[4h] 39 g/m³
$LC50_{ihl\ rat}$:	[10h] 20 g/m³
$LD50_{drm\ rbt}$:	20 000 mg/kg
$LD50_{oral\ mouse}$:	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.

13 mL CC

Chemical: *potassium hydroxide solution* — CAS No.: 1310-58-3

$LC50_{pimephales\ promelas/96h}$:	880 mg/L
Water hazard class (DE):	1 WGK No.: 0345
Storage class (VCI):	8 B

13 mL Elution Buffer

Chemical: *chemicals/mixture < 1%* — 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.: 39450-01-6l

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 Effected Concentration	
$LC50_{fish/96h}$:	$>5000_{24h}$ mg/L
$EC50_{daphnia/48h}$:	$>10_{24h}$ g/L
$IC50_{scenedesmus\ quadricauda/72h}$:	$IC5_{7d}$ >10 g/L
$EC10_{pseudomonas\ putita/16h}$:	EC5: >10 g/L
Water hazard class (DE):	0
$Dispersion\ coefficient_{(octanol-water)}$:	-1.76
Storage class (VCI):	10

60 mL VL

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

$PNEC_{(fresh\ water)}$:	-
PNEC = Predicted No Effected Concentration	
$LC50_{leuciscus\ idus/96h}$:	1759 mg/L
$LC50_{fish/96h}$:	[4d] 690-1850; [48h] 1758-2420 mg/L
$EC50_{daphnia/48h}$:	70.2 mg/L
$EC10_{pseudomonas\ putita/16h}$:	[72h] 11.8-33.5 mg/L
Water hazard class (DE):	1 WGK No.: 0788
Storage class (VCI):	12

13 mL VW1

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

$PNEC_{(fresh\ water)}$:	-
PNEC = Predicted No Effected Concentration	
$LC50_{leuciscus\ idus/96h}$:	1759 mg/L
$LC50_{fish/96h}$:	[4d] 690-1850; [48h] 1758-2420 mg/L
$EC50_{daphnia/48h}$:	70.2 mg/L
$EC10_{pseudomonas\ putita/16h}$:	[72h] 11.8-33.5 mg/L
Water hazard class (DE):	1 WGK No.: 0788

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

Storage class (VCI): 12

Chemical: *2-propanol* CAS No.: 67-63-0
PNEC(fresh water) : 140.9 mg/L
PNEC = Predicted No Effected Concentration
LC50fish/96h : 1400 mg/L
EC50daphnia/48h : 13.3 g/L
IC50scenedesmus quadricauda/72h : >1000 mg/L
EC10pseudomonas putita/16h : EC5: 1050 mg/L
Water hazard class (DE): 1 WGK No.: 0135
Dispersion coefficient(octanol-water) : 0.05
Storage class (VCI): 3

10 mL WB

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

12.2 Persistence and degradability
not necessary

12.3 Bioaccumulative potential
not necessary

12.4 Mobility in soil
not necessary

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
no additional data available

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

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

SECTION 14: Transport information
UN 1993 class 3 III, **Excepted Quantities** (≤30 mL/∑≤1 L) = ADR/ IATA E1
or
14.1 UN number: 1993 14.2 UN proper shipping name: Flammable liquid, n.o.s. (ethanol, 2-propanol mixture)
14.3 Class: 3 14.4 Packing group: II
Road transport
Classification code: F1
Limited Quantity: 1 L Tunnel restriction code: E
Excepted Quantity: E 2 Special instructions: 640C
Air transport
PAX: 353 max. weight PAX: 5 L
CAO: 364 max. weight CAO: 60 L
Maritime transport
EmS: F-E, S-E Storage category: B

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany
DE / international: Tel.: +49 24 21 969-0 Fax: +49 24 21 969-199 E-mail: info@mn-net.com
CH: Tel.: +41 62 388 55 00 Fax: +41 62 388 55 05 E-mail: sales-ch@mn-net.com
FR: Tel.: +33 388 68 22 68 Fax: +33 388 51 76 88 E-mail: sales-fr@mn-net.com
US: Tel.: +1 484 821 0984 Fax: +1 484 821 1272 E-mail: sales-us@mn-net.com

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
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.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

16.1.2 List of relevant P phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P260D	Do not breathe vapours.
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.
P330	Rinse mouth.
P390	Absorb spillage to prevent material damage.

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

MACHEREY-NAGEL GmbH & Co. KG 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.
MACHEREY-NAGEL GmbH & Co. KG 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 MACHEREY-NAGEL GmbH & Co. KG 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
Regulation 669/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
Regulation 1480/2018/EU, 4th adaptation of CLP regulation to technical and scientific progress
TRGS 900, German engineering rules governing limits in air at work, updated 03/2019

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international:	CH:	FR:	US:
Tel.: +49 24 21 969-0	Tel.: +41 62 388 55 00	Tel.: +33 388 68 22 68	Tel.: +1 484 821 0984
Fax: +49 24 21 969-199	Fax: +41 62 388 55 05	Fax: +33 388 51 76 88	Fax: +1 484 821 1272
E-mail: info@mn-net.com	E-mail: sales-ch@mn-net.com	E-mail: sales-fr@mn-net.com	E-mail: sales-us@mn-net.com

MACHEREY-NAGEL ISO 9001 CERTIFIED

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

MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6–8 · 52355 Düren · Germany

DE / international:
Tel.: +49 24 21 969-0
Fax: +49 24 21 969-199
E-mail: info@mn-net.com

CH:
Tel.: +41 62 388 55 00
Fax: +41 62 388 55 05
E-mail: sales-ch@mn-net.com

FR:
Tel.: +33 388 68 22 68
Fax: +33 388 51 76 88
E-mail: sales-fr@mn-net.com

US:
Tel.: +1 484 821 0984
Fax: +1 484 821 1272
E-mail: sales-us@mn-net.com