

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 1/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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

1.1 Product identifier

REF 740900.10
Product name NucleoSpin cfDNA XS (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 5 mL BB
1 x 13 mL Elution Buffer
1 x 1.8 mL PB
1 x 1-75 mg Proteinase K (lyo)
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
Valenciennner 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 GHS05 GHS07 GHS08 GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H225	Flam. Liq. 2
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H318	Eye Dam. 1
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H411	Aquatic Chronic 2
H412	Aquatic Chronic 3

2.1 Classification of the substance or mixture

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 2/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

5 mL BB



GHS02

GHS05

GHS07

GHS09

Signal word

DANGER

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

H318

Eye Dam. 1

H411

Aquatic Chronic 2

H412

Aquatic Chronic 3

13 mL Elution Buffer

Signal word

Do not need labelling as hazardous

-

No hazard class

1.8 mL PB

Signal word

Do not need labelling as hazardous

-

No hazard class

1-75 mg Proteinase K (Iyo)



GHS07

GHS08

Signal word

DANGER

Hazard identification

Hazard classes/categories

H315

Skin Irrit. 2

H319

Eye Irrit. 2

H334

Resp. Sens. 1

10 mL WB



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 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.

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Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 3/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

5 mL BB



GHS02



GHS05



GHS07



GHS09

Signal word: DANGER

H318

Causes serious eye damage.

P280sh, P305+351+338, P310

Wear protective gloves/eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

13 mL Elution Buffer

Do not need labelling as hazardous

Signal word: -

1.8 mL PB

Do not need labelling as hazardous

Signal word: -

1-75 mg Proteinase K (Iyo)



GHS07



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.

10 mL WB



GHS02

Signal word: DANGER

2.3

Other hazards

Possible hazards from physicochemical properties

Generally in the case of pH values are less than 2 or higher than 11.5 then it is corrosive. In the case of pH values are less than 5 or higher than 9 then it is irritant. 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

Causes varying degrees of acid burns on the skin, to the eyes and to the mucous membranes and wounds which do not heal quickly depending on the concentration, temperature and the exposure time. Vapours especially which steam from hot liquids and mist can have a severe irritant effect upon the eyes and the respiratory organs.

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. -

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 4/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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

5 mL BB

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: $C_2H_6N_4S$
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

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: 35 - <55 %
acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: *Triton® X-114* CAS No.: 9036-19-5
Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H410, Aquatic Chronic 1
Formula: $C_{30}H_{54}O_9$
Pseudonym: Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-
TSCA Inventory: listed
SVHC listed: listed
EC No.: 232-658-1
RTECS: RI0720000
KE No.: KE-33567
Concentration: 2.5 - <10 %
acc. CLP (GHS): H318, Eye Dam. 1, H411, Aquatic Chronic 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.

1.8 mL PB

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 5/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

Chemical:	glycerole	CAS No.:	56-81-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	C ₃ H ₈ O 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:	10 - <50 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

1-75 mg Proteinase K (Iyo)

Chemical:	proteinase K (origin: tritirachium album)	CAS No.:	39450-01-6
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:	90 - <100 %		
acc. CLP (GHS):	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		

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 ₂ H ₆ O; C ₂ H ₅ OH		
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. Remove contaminated clothing. Show product package, packing insert and this material safety data sheet to the doctor. 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 for min. 10 minutes with eye washing bottle, eye douche or running water (protect intact eye). Before (if possible) apply eye drops Proxymetacaine 0.5%, if the opening the eyelid convulsion is painful. Further treatment to be carried out by an eye specialist.

4.1.3 After INHALATION of vapours

After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. 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. ---

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 6/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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

After EYE CONTACT rinse immediately with plenty of water for a long time. Eyelid convulsion measures. Name the corrosive chemical. Further treatment must to be carried out by an eye specialist. 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. 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 eye protection, respectively face protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

not necessary, 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

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. Use inbreakable container for transport of glass bottles.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

5 mL BB

Chemical: guanidinium thiocyanate

CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 42.4 µg/L

PNEC = Predicted No Effect Concentration

www.mn-net.com

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 7/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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/m³
DNEL = Derived No-Effect Level (for workers)

PNEC_(fresh water): 0.96 mg/L
PNEC = Predicted No Effect 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

Chemical: *Triton® X-114*

CAS No.: 9036-19-5

13 mL Elution Buffer

Chemical: *chemicals/mixture < 1%*

CAS No.: -

1.8 mL PB

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 Effect 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

1-75 mg Proteinase K (Iyo)

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

CAS No.: 39450-01-6

SUVA(CH) MAK value: 0,00006_{15min} mg/m³

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 Effect 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

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.

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 8/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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

5 mL BB

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	5-7	
Flash point:	26 °C	
Specific gravity:	1.01 g/cm ³	

13 mL Elution Buffer

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	8-9	
Specific gravity:	1.0 g/cm ³	

1.8 mL PB

Appearance: liquid	Colour: colourless	Odor: alcoholic
Specific gravity:	1.11 g/cm ³	

1-75 mg Proteinase K (Iyo)

Appearance: solid (lyoph.)	Colour: slightly grey	Odor: odorless
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10 mL WB

Appearance: liquid	Colour: colourless	Odor: alcoholic
pH:	7-8	
Flash point:	10 °C	
Specific gravity:	0.91 g/cm ³	

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

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.

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 9/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

5 mL BB

Chemical: *guanidinium thiocyanate* 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_{oral rat}: 593 mg/kg
 LC50_{drum rbt}: >2000 mg/m³
 LC50_{ihl rat}: [4h] 5.319 mg/L
 LD50_{ipr mus}: 300 mg/kg
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

Chemical: *ethanol* CAS No.: 64-17-5
 TSCA Inventory: listed California Proposition 65 List: not listed
 ACGIH: 1000 ppm
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
 Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic
 Australia NICNAS: not listed Canada CEPA 1999: DSL yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-13217
 LD50_{oral rat}: 6200 mg/kg
 LC_{Lowihl gpg}: 21.9 g/m³
 LC_{Loworal hmn}: 1400 mg/kg
 LC50_{ihl mouse}: [4h] 39 g/m³
 LC50_{ihl rat}: [10h] 20 g/m³
 LD50_{drum rbt}: 20 000 mg/kg
 LD50_{oral mouse}: 3450 mg/kg

TRGS 905 (DE): K5, M5, R_F C

Chemical: *Triton® X-114* CAS No.: 9036-19-5
 TSCA Inventory: listed
 Korea Exist.Chem.Inventory: KE-33567

13 mL Elution Buffer

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

1.8 mL PB

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_{oral rat}: 12.6 g/kg
 LD50_{drum rbt}: >18.7 g/kg

TRGS 905 (DE): R_F C

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 10/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

1-75 mg Proteinase K (Iyo)

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

CAS No.: 39450-01-6

TSCA Inventory: listed (CAS 102925-54-2)

Japan CSCL/PRTR: not listed

Japan ISHL: not listed

Korea Exist.Chem.Inventory: not listed

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.

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

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_{oral rat}: 6200 mg/kg

LC_{Lowihl gpg}: 21.9 g/m³

LC_{Loworl 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.

5 mL BB

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_{fish/96h}: [4d] 89.1 mg/L

EC50_{daphnia/48h}: 42.4 mg/L

IC50_{scenedesmus quadricauda/72h}: 130 mg/L

EC10_{pseudomonas putida/16h}: [10d] 200 mg/L

Water hazard class (DE): 3

Dispersion coefficient_(octanol-water): [pH 5.1] -1.11

Storage class (VCI): 12

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC (fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50_{daphnia magna/48h}: >100 mg/L

LC50_{pimephales promelas/96h}: 13400 - 15100 mg/L

LC50_{leuciscus idus/96h}: [48h] 8140 mg/L

LC50_{fish/96h}: 13 g/L

EC50_{daphnia/48h}: 9.3-14.2 g/L

IC50_{scenedesmus quadricauda/72h}: [7d] 5000 mg/L

EC10_{pseudomonas putida/16h}: [EC5] 6500 mg/L

Water hazard class (DE): 1 WGK No.: 0096

Dispersion coefficient_(octanol-water): -0.31

Storage class (VCI): 3

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 11/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

Chemical: *Triton® X-114*

CAS No.: 9036-19-5

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

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

Water hazard class (DE): 1

Storage class (VCI): 12-13

13 mL Elution Buffer

Chemical: *chemicals/mixture < 1%*

CAS No.: -

Water hazard class (DE): 1

Storage class (VCI): 12-13

1.8 mL PB

Chemical: *glycerole*

CAS No.: 56-81-5

PNEC(fresh water) : 0.885 mg/L

PNEC = Predicted No Effect Concentration

LC50_{fish/96h} : >5000_{24h} mg/L

EC50_{daphnia/48h} : >10_{24h} g/L

IC50_{scenedesmus quadricauda/72h} : IC50_{7d} >10 g/L

EC10_{pseudomonas putida/16h} : EC5 : >10 g/L

Water hazard class (DE): 0

Dispersion coefficient_(octanol-water) : -1.76

Storage class (VCI): 10

1-75 mg Proteinase K (Iyo)

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

CAS No.: 39450-01-6

Water hazard class (DE): 1

Storage class (VCI): 13

10 mL WB

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC(fresh water) : 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50_{daphnia magna/48h} : >100 mg/L

LC50_{pimephales promelas/96h} : 13400 - 15100 mg/L

LC50_{leuciscus idus/96h} : [48h] 8140 mg/L

LC50_{fish/96h} : 13 g/L

EC50_{daphnia/48h} : 9.3-14.2 g/L

IC50_{scenedesmus quadricauda/72h} : [7d] 5000 mg/L

EC10_{pseudomonas putida/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

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).

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 12/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

13.1 Waste treatment methods

Normally it is possible to empty small amounts (diluted!) into drains. Empty containers of corrosive reagents prior to disposal, rinse with water.

SECTION 14: Transport information

UN 1993 class 3 II, **Excepted Quantities** (≤ 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. (ethanol mixture)

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

Road transport

Classification code: F1

Limited Quantity: 1 L

Excepted Quantity: E 2

Tunnel restriction code: E

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

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

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.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H411	Toxic to aquatic life with long lasting effects.
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.
P233	Keep container tightly closed.
P261sh	Avoid breathing dust/vapours.
P264W	Wash with water thoroughly after handling.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/eye protection.

Safety Data Sheet

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

REF: 740900.10

NucleoSpin cfDNA XS (10)

Page: 13/13

Printing date: 15.11.2021

Date of issue: 19.10.2021

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.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P330	Rinse mouth.
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, 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

Regulation 849/2021/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

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