

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 1/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

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

1.1 Product identifier

REF 740982.50
 Product name NucleoSpin totalRNA FFPE (50)

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 800 µL Liquid Proteinase K
- 1 x 1 mL MKA
- 1 x 10 mL MLF
- 1 x 25 mL MW2
- 1 x 60 mL MX
- 1 x 60 mL Paraffin Dissolver (blue)
- 1 x 200 U, Size D, rDNase
- 1 x 13 mL RNase-free H₂O

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses
 Product for analytical use.
 Exposure Scenario Classification according REACH, RIP 3.2 Codes: SU 0-2, PC 21, PROC 15, AC 0
 The exposure scenario is integrated into sections 1-16.

Uses advised against
 not described

1.3 Details of the supplier of the safety data sheet

Manufactured by:
 MACHEREY-NAGEL GmbH & Co. KG
 Valenciener Str. 11, 52355 Düren, GERMANY
 Tel.: +49 2421 969 0
 E-mail: sds@mn-net.com (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
Hazard identification	Hazard classes/categories
H225	Flam. Liq. 2
H304	Asp. Tox. 1
H319	Eye Irrit. 2
H334	Resp. Sens. 1
H335	STOT SE 3
H351	Carc. 2

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 2/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

2.1 Classification of the substance or mixture

7 mL DRB (OEM)

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

800 µL Liquid Proteinase K

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

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

25 mL MW2

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

60 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

60 mL Paraffin Dissolver (blue)



GHS08

Signal word DANGER

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

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 3/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

200 U, Size D, rDNase



GHS08

Signal word

DANGER

Hazard identification

H334

Hazard classes/categories

Resp. Sens. 1

13 mL RNase-free H₂O

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: -

800 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: -

25 mL MW2

Do not need labelling as hazardous

Signal word: -

60 mL MX



GHS02



GHS07



GHS08

Signal word: DANGER

H351

Suspected of causing cancer.

P201, P280sh

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 4/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

Obtain special instructions before use. Wear protective gloves/eye protection.

60 mL Paraffin Dissolver (blue)



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 H₂O

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.

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 5/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

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: C₃ H₈ O₃
 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: CH₃ COOH/K/Na•H₂ 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: C₄ H₁₁ NO₃
 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.

25 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.

60 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: C₄ H₈ O₂
 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

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 6/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

60 mL Paraffin Dissolver (blue)

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

Classification: H304, Asp. Tox. 1
Formula: C₁₅-C₂₀, 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 H₂O

Chemical: *water* CAS No.: 7732-18-5
Classification: No criteria for classification or naming of chemical not required.
Formula: H₂O
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. ---

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 7/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

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)

Safety Data Sheet

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

REF: 740982.50 NucleoSpin totalRNA FFPE (50) Page: 8/15
 Printing date: 12.05.2021 Date of issue: 12.04.2021

Chemical: *chemicals/mixture < 2%* 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 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 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/m³
 DNEL = Derived No-Effect Level (for workers)
 PNEC_(fresh water): 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

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

60 mL MX
 Chemical: *1,4-dioxane* CAS No.: 123-91-1
 DNEL: 73 mg/m³
 DNEL = Derived No-Effect Level (for workers)
 PNEC_(fresh water): 10 mg/L
 PNEC = Predicted No Effect Concentration
 EU value: 20 ppm / 73 mg/m³
 TRGS 900 (DE): 20 ppm / 73 mg/m³
 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/m³
 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_{30min} 1 ppm / 3.6 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: [skin] TWA 100 ppm / 360 mg/m³

60 mL Paraffin Dissolver (blue)
 Chemical: *paraffin dissolver* CAS No.: 64742-46-7
 TRGS 900 (DE): 600 mg/m³
 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/m³
 OSHA: 5 mg/m³

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

200 U, Size D, rDNase

Safety Data Sheet

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

REF: 740982.50	NucleoSpin totalRNA FFPE (50)	Page: 9/15
Printing date: 12.05.2021	Date of issue: 12.04.2021	

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

13 mL RNase-free H₂O
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 ³	

800 µL Liquid Proteinase K

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

1 mL MKA

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

10 mL MLF

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

25 mL MW2

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

60 mL MX

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

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 10/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

Solubility in water: < 2 %
 Flashing temperature: 375 °C
 Volatiles by volume: 149 g/m³

60 mL Paraffin Dissolver (blue)

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

200 U, Size D, rDNase

Appearance: solid (lyoph.)	Colour: white	Odor: odorless
----------------------------	---------------	----------------

13 mL RNase-free H₂O

Appearance: liquid	Colour: colourless	Odor: odorless
pH: 6-8		
Specific gravity: 1.0 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

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.: -

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 11/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

800 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_{orl rat}: 12.6 g/kg
 LD50_{drm rbt}: >18.7 g/kg
 TRGS 905 (DE): Rf 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_{orl rat}: 5000 mg/kg

25 mL MW2

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

60 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_{orl rat}: 5150 mg/kg
 LC50_{ihl rat}: [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, Rf C

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 12/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

60 mL Paraffin Dissolver (blue)

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_{orl rat}: >5000 mg/kg
 LC50_{inh rat}: >5266_{4h} mg/m³
 LD50_{drm rbt}: >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 H₂O

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.: -

800 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_(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

CAS No.: 56-81-5

1 mL MKA

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

CAS No.: -

10 mL MLF

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 13/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

Chemical: *tris(hydroxymethyl)aminomethane* CAS No.: 77-86-1
 PNEC(fresh water) : no data mg/L
 PNEC = Predicted No Effected Concentration
 LC50_{fish/96h} : LD0 (4d): 1-10 g/L
 EC50_{pseudokirchneriella subcapitata/72h} : 397;48h: 473 mg/L
 EC10_{pseudomonas putita/16h} : 13h g/L
 Water hazard class (DE): 2
 Dispersion coefficient(octanol-water) : -1.56
 Storage class (VCI): 12-13

25 mL MW2

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

60 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_{fish/96h} : [21d] 100 mg/L
 EC50_{daphnia/48h} : 1 g/L
 IC50_{scenedesmus quadricauda/72h} : [72h] 1 g/L
 Water hazard class (DE): 2 WGK No.: 0086
 Dispersion coefficient(octanol-water) : -0.42
 Storage class (VCI): 3

60 mL Paraffin Dissolver (blue)

Chemical: *paraffin dissolver* CAS No.: 64742-46-7
 LC50_{fish/96h} : >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 H₂O

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

Safety Data Sheet

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

REF: 740982.50

NucleoSpin totalRNA FFPE (50)

Page: 14/15

Printing date: 12.05.2021

Date of issue: 12.04.2021

SECTION 13: Disposal considerations

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (waste code number 16 05 06). Or collect in solvent waste (waste code number 07 07 04).

13.1 Waste treatment methods

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

SECTION 14: Transport information

14.1 UN number:	1993	14.2 UN proper shipping name:	Flammable liquid, n.o.s. (1,4-dioxane mixture)
14.3 Class:	3	14.4 Packing group:	II
<i>Road transport</i>			
Classification code:	F1	Tunnel restriction code:	E
Limited Quantity:	1 L	Special instructions:	640C
Excepted Quantity:	E 2		
<i>Air transport</i>			
PAX:	353	max. weight PAX:	5 L
CAO:	364	max. weight CAO:	60 L
<i>Maritime transport</i>			
EmS:	F-E, S-E	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
 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.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Safety Data Sheet

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

REF: 740982.50	NucleoSpin totalRNA FFPE (50)	Page: 15/15
Printing date: 12.05.2021	Date of issue: 12.04.2021	

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, 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
 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

