

Safety Data Sheet

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

REF: 740406.10	NucleoSpin RNA Set for NucleoZOL (10)	Page: 1/9
Printing date: 12.05.2021	Date of issue: 22.11.2018	

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

1.1 Product identifier

REF 740406.10
 Product name NucleoSpin RNA Set for NucleoZOL (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 MX
 1 x 6 mL RA3
 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



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

2.1 Classification of the substance or mixture

13 mL MX



GHS02 GHS07 GHS08

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

6 mL RA3

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

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).

13 mL MX



GHS02 GHS07 GHS08

Signal word: DANGER

H351
Suspected of causing cancer.

P201, P280sh
Obtain special instructions before use. Wear protective gloves/eye protection.

6 mL RA3

Do not need labelling as hazardous
Signal word: -

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. Suspected of causing cancer. -

Information pertaining to particular risks to the environment

PBT: not applicable
vPvB: not applicable

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Other hazards

SECTION 3: Composition/information on ingredients

3.1 Substances or 3.2 Mixtures

13 mL MX

Chemical:	1,4-dioxane	CAS No.:	123-91-1
Classification:	H225, Flam. Liq. 2, H319, Eye Irrit. 2, H335, STOT SE 3, H351, Carc. 2		
Formula:	C ₄ H ₈ O ₂		
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		

6 mL RA3

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

13 mL RNase-free H₂O

Chemical:	water	CAS No.:	7732-18-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	H ₂ O		
TSCA Inventory:	listed		
REACH Reg. No.:	exempt, Annex IV		
EC No.:	231-791-2		
RTECS:	ZC0110000		
KE No.:	KE-35400		
Concentration:	90 - <100 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

3.3 Remarks

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

List of H and P phrases: see section 16.1

SECTION 4: First aid measures

4.1 Description of first aid measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

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. ---

4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested. ---

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4.2 Most important symptoms and effects, both acute and delayed

CMR Effects: Suspected of causing cancer. ---

4.3 Indication of any immediate medical attention and special treatment needed

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.

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): 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

13 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

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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

6 mL RA3

Chemical: *chemicals/mixture < 1%*

CAS No.: -

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

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.

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

6 mL RA3

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

13 mL RNase-free H₂O

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

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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.

13 mL MX

Chemical:	<i>1,4-dioxane</i>	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, R _F C		

6 mL RA3

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

13 mL RNase-free H₂O

Chemical:	<i>water</i>	CAS No.:	7732-18-5
TSCA Inventory:	listed		
Korea Exist.Chem.Inventory:	KE-35400		

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SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

13 mL MX

Chemical: *1,4-dioxane*
 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

CAS No.: 123-91-1

6 mL RA3

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

CAS No.: -

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

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 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. (1,4-dioxane mixture)

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

Road transport

Classification code: F1 Tunnel restriction code: E

Limited Quantity: 1 L Special instructions: 640C

Excepted Quantity: E 2

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

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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.
 H319 Causes serious eye irritation.
 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.
 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

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.

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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

KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)

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Revisions/Updates

Reason for Revision: 2016-03 Adaptation of regulation 1221/2015/EU