

Safety Data Sheet

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

REF: 740953	NucleoSpin Plasmid Buffer Set	Page: 1/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

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

1.1 Product identifier

REF 740953
 Product name NucleoSpin Plasmid Buffer Set

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 75 mL A1
 1 x 100 mL A2 (with LyseControl)
 1 x 100 mL A3
 1 x 0.6-100 mg RNase A (lyo)

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



GHS07 GHS08

Signal word DANGER

Hazard identification	Hazard classes/categories
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H334	Resp. Sens. 1

2.1 Classification of the substance or mixture

75 mL A1

Signal word Do not need labelling as hazardous
 -

No hazard class

Safety Data Sheet

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

REF: 740953	NucleoSpin Plasmid Buffer Set	Page: 2/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

100 mL A2 (with LyseControl)



GHS07

Signal word: WARNING

Hazard identification	Hazard classes/categories
H315	Skin Irrit. 2
H319	Eye Irrit. 2

100 mL A3



GHS07

Signal word: WARNING

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

0.6-100 mg RNase A (lyo)



GHS08

Signal word: DANGER

Hazard identification	Hazard classes/categories
H334	Resp. Sens. 1

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** 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 sensiblizing substances.

75 mL A1

Do not need labelling as hazardous
Signal word: -

100 mL A2 (with LyseControl)



GHS07

Signal word: WARNING

Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 3/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

100 mL A3



GHS07

Signal word: WARNING

0.6-100 mg RNase A (Iyo)



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.

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. ---

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: May cause allergy or asthma symptoms or breathing difficulties if inhaled. -

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

75 mL A1

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.

100 mL A2 (with LyseControl)

Chemical: *sodium hydroxide solution (diluted < 2 %)*

CAS No.: 1310-73-2d

Classification: H314, Skin Corr. 1B

Formula: NaOH·H₂O

Pseudonym: diluted soda lye

TSCA Inventory: listed

REACH Reg. No.: 01-2119457892-27-xxxx

EC No.: 215-185-5

Indice No.: 011-002-00-6

RTECS: WB4900000

KE No.: KE-31487

Concentration: 0.5 - <1 %

acc. CLP (GHS): H315, Skin Irrit. 2, H319, Eye Irrit. 2

Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 4/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3
 Classification: H228, Flam. Sol. 1, H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H318, Eye Dam. 1, H332, Acute Tox. 4 inh., H335, STOT SE 3, H412, Aquatic Chronic 3
 Formula: $C_{12}H_{25}NaO_4S$
 Pseudonym: sodium lauryl sulfate, sulfuric acid monododecyl ester sodium salt
 TSCA Inventory: listed
 REACH Reg. No.: 01-2119489461-32-xxxx
 EC No.: 205-788-1
 RTECS: WT1050000 MFCD: 00036175
 KE No.: KE-21884
 Concentration: 0.1 - <1 %
 acc. CLP (GHS): The criteria for classification are not fulfilled.

Chemical: *indicator 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.

100 mL A3

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

0.6-100 mg RNase A (lyo)

Chemical: *RNase* CAS No.: 9001-99-4
 Classification: H334, Resp. Sens. 1
 Formula: Enzyme Comm. No. 3.1.27.5, origin: bovine pancreas (controlled population)
 Pseudonym: Nuclease, ribo-
 TSCA Inventory: listed
 EC No.: 232-646-6
 RTECS: RF0760000
 KE No.: KE-30341
 Concentration: 90 - <100 %
 acc. CLP (GHS): H334, Resp. Sens. 1

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.

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

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: 740953	NucleoSpin Plasmid Buffer Set	Page: 5/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

- 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. ---
- 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**

- 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**
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**
And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water.
- 6.4 **Reference to other sections**

SECTION 7: Handling and storage

- 7.1 **Precautions for safe handling**
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): 12
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**

75 mL A1		
Chemical:	<i>chemicals/mixture < 1%</i>	CAS No.: -
100 mL A2 (with LyseControl)		



Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 6/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3

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: *indicator dye(s)* CAS No.: -

100 mL A3

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 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

0.6-100 mg RNase A (Iyo)

Chemical: *RNase* CAS No.: 9001-99-4

8.2 Exposure controls

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 (f.ex. from Ansell or KCL).

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

75 mL A1

Appearance: liquid	Colour: colourless	Odor: odorless
pH:	7.5-8.5	
Specific gravity:	1.00 g/cm ³	

100 mL A2 (with LyseControl)

Appearance: liquid	Colour: blue	Odor: odorless
pH:	13	
Specific gravity:	1.008 g/cm ³	

100 mL A3

Appearance: liquid	Colour: colourless	Odor: acetic
pH:	4-4.5	
Specific gravity:	1.14 g/cm ³	

0.6-100 mg RNase A (Iyo)

Appearance: solid (Iyoph.)	Colour: colourless	Odor: odorless
Solubility in water:	0-100 %	

Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 7/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

9.2 Other information

Relevant Properties of Substance Group

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

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.

75 mL A1

Chemical: *chemicals/mixture < 1%*
 TSCA Inventory: all listed, <1%
 Korea Exist.Chem.Inventory: listed

CAS No.: -

100 mL A2 (with LyseControl)

Chemical: *sodium hydroxide solution*
 TSCA Inventory: listed
 Exposure Routes: inhalation, ingestion, skin and/or eye contact
 Target Organs: Eyes, skin, respiratory system
 Symptoms: -
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: listed $\geq 1,0\%$ / $\geq 1,0\%$ SDS required
 Korea Exist.Chem.Inventory: KE-31487
 LD50_{orl rat}: [$< 1\%$] > 50 g/kg
 LD50_{drm rbt}: not applicable
 LD50_{orl mus}: [$< 1\%$] > 4 g/kg

CAS No.: 1310-73-2d

California Proposition 65 List: not listed

Chemical: *dodecyl sulfate, sodium salt*
 TSCA Inventory: listed
 Australia NICNAS: not listed
 Japan CSCL/PRTR: PRTR - Class I Designated Chemical Substance, Japan PDSCL: not listed
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-21884
 LD50_{orl rat}: 1288 mg/kg
 LC50_{inh rat}: 3900_{1h} mg/m³
 LD50_{drm rbt}: 10 g/kg

CAS No.: 151-21-3

California Proposition 65 List: not listed

Canada CEPA 1999: DSL yes

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

CAS No.: -

Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 8/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

100 mL A3

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 PDSCCL: 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.

0.6-100 mg RNase A (Iyo)

Chemical: *RNase* CAS No.: 9001-99-4
 TSCA Inventory: listed
 Japan CSCL/PRTR: not listed
 Japan ISHL: not listed
 Korea Exist.Chem.Inventory: KE-30341
 LD50_{intrapertitoneaal rat}: 392 mg/kg
 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.

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

75 mL A1

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

100 mL A2 (with LyseControl)

Chemical: *sodium hydroxide solution* CAS No.: 1310-73-2d
 LC50_{leuciscus idus/96h}: 35-189 mg/L
 LC50_{fish/96h}: 45.4 mg/L
 EC50_{daphnia/48h}: >100 mg/L
 Water hazard class (DE): nwg WGK No.: 0142
 Storage class (VCI): 12-13

Chemical: *dodecyl sulfate, sodium salt* CAS No.: 151-21-3
 LC50_{daphnia magna/48h}: 6.3 mg/L
 LC50_{fish/96h}: 1.31-22.5 mg/L
 Water hazard class (DE): 2
 Dispersion coefficient_(octanol-water): 1.6
 Storage class (VCI): 12-13

Chemical: *indicator dye(s)* CAS No.: -
 Storage class (VCI): 12-13

100 mL A3

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 PNEC_(fresh water): -
 PNEC = Predicted No Effect 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

Safety Data Sheet

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

REF: 740953

NucleoSpin Plasmid Buffer Set

Page: 9/10

Printing date: 12.05.2021

Date of issue: 11.12.2020

0.6-100 mg RNase A (lyo)

Chemical: *RNase*
 Water hazard class (DE): 1
 Storage class (VCI): 13

CAS No.: 9001-99-4

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

SECTION 14: Transport information

14.1 - 14.4: No dangerous goods according to the transport regulations

14.5 Environmental hazards

none

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

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

16.1.2 List of relevant P phrases

P261sh	Avoid breathing dust/vapours.
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Safety Data Sheet

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

REF: 740953	NucleoSpin Plasmid Buffer Set	Page: 10/10
Printing date: 12.05.2021	Date of issue: 11.12.2020	

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.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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

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
 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
 2017-11 Adaption of ECHA Registration dossier