

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 1/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

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

1.1 Product Identifier / Product Name

REF	744330.1	
Product Name	NucleoMag DNA Microbiome (1x96)	
2 x 10 mL SX		UFI: V8PV-K3MC-S20H-ES6Y
2 x 1,5 mL B-Beads		
1 x 25 mL MIc		
1 x 40 mL MI2		
1 x 200 mL MI3		UFI: E4FW-93GQ-X203-AP6W
1 x 30 mL MI5		
1 x 125 mL MI1		
1 x 125 mL MI4		UFI: D68V-N3Q1-7209-VVN5

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 and of the Safety Data Sheet

Manufactured by:

MACHEREY-NAGEL GmbH & Co. KG
 Valenciener Str. 11, 52355 Düren, Germany
 Phone: +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.

USA: American Association Of Poison Control Centers

Rockville, MD 20857, tel. 1-800-222-1222, <<https://www.poisonhelp.org>>

DE: Gemeinsames Giftinformationszentrum (GGIZ)

99089 Erfurt tel. +49 361 730 730

<<https://www.ggiz-erfurt.de>>

You find our current versions of SDS in Internet:

<<http://www.mn-net.com/SDS>>

SECTION 2: Hazard(s) Identification

2.0 Classification of the complete Product



GHS02 GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H319	Eye Irrit. 2
H336	STOT SE 3

2.1 Classification of the substance or mixture

200 mL MI3



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 2/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

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GHS02



GHS07

Signal Word

WARNING

Hazard Identification

Hazard Classes/Categories

H226

Flam. Liq. 3

H319

Eye Irrit. 2

H336

STOT SE 3

40 mL MI2

Signal Word

Do not need labelling as hazardous

No Hazard Class

125 mL MI4



GHS02



GHS07

Signal Word

WARNING

Hazard Identification

Hazard Classes/Categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

H315

Skin Irrit. 2

H319

Eye Irrit. 2

10 mL SX



GHS07

Signal Word

WARNING

Hazard Identification

Hazard Classes/Categories

H319

Eye Irrit. 2

125 mL MI1

Signal Word

Do not need labelling as hazardous

No Hazard Class

30 mL MI5

Signal Word

Do not need labelling as hazardous

No Hazard Class



Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 3/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

25 mL Mlc

Signal Word Do not need labelling as hazardous
-
No Hazard Class

1,5 mL B-Beads

Signal Word Do not need labelling as hazardous
-
No Hazard Class

List of H phrases: see section 16.2

2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012). 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) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A.

200 mL MI3



GHS02 GHS07

Signal Word: WARNING
H226, H319, H336
Flammable liquid and vapor.Causes serious eye irritation.May cause drowsiness or dizziness.
P210, P260D, P280sh
Do not breathe vapors.Keep away from heat/sparks/open flames/hot surfaces. No smoking.Wear protective gloves/eye protection.

40 mL MI2

Do not need labelling as hazardous
Signal Word: -

125 mL MI4



GHS02 GHS07

Signal Word: WARNING

10 mL SX



GHS07

Signal Word: WARNING

125 mL MI1

Do not need labelling as hazardous
Signal Word: -

30 mL MI5

Do not need labelling as hazardous
Signal Word: -

25 mL Mlc

Do not need labelling as hazardous

Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 4/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

Signal Word: -

1,5 mL B-Beads

Do not need labelling as hazardous

Signal Word: -

Label elements of the complete product



GHS02



GHS07

Signal Word: WARNING

H226, H319, H336

Flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.

P210, P260D, P280sh

Do not breathe vapors. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wear protective gloves/eye protection.

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. Vapour forms explosive mixtures with air.

Information pertaining to particular Risks to Human and possible Symptoms

Cause after oral intake, impairments of health when ingested in small quantities. May cause drowsiness or dizziness.

Information pertaining to particular Risks to the Environment

PBT: not applicable

vPvB: not applicable

Possible endocrine disrupting effects

data not available

SECTION 3: Composition/Information on Ingredients

3.1 Substances or 3.2 Mixtures

125 mL MI4

Substance name: *guanidine hydrochloride*

CAS No.: 50-01-1

Substance rating: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Chemical Formula: CH₆ClN₃

Synonyms (de): Guanidiniumchlorid

REACH Reg. No.: 01-2119977063-35-0005

EC No.: 200-002-3

Indice No.: 607-148-00-0

Concentration: 24 - <36 %

acc. GHS: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2

Substance name: *ethanol*

CAS No.: 64-17-5

(denatured with 1% 2-butanone)

Substance rating: H225, Flam. Liq. 2

Chemical Formula: C₂H₆O; C₂H₅OH

Synonyms (de): Äthylalkohol, vergällter Spiritus

REACH Reg. No.: 01-2119457610-43-xxxx

EC No.: 200-578-6

Indice No.: 603-002-00-5

Concentration: 35 - <55 %

acc. GHS: H226, Flam. Liq. 3

10 mL SX



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REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 5/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

Substance name: *ethylendinitrilo tetraacetic acid (EDTA)*
CAS No.: 60-00-4

Substance rating: H319, Eye Irrit. 2
Chemical Formula: C₁₀ H₁₆ N₂ O₈
Synonyms (de): Ethylendiamintetraessigsäure, Titriplex® II
REACH Reg. No.: 01-2119486399-18-xxxx
Concentration: 10 - <25 %
acc. GHS: H319, Eye Irrit. 2

125 mL MI1

Substance name: *sodium chloride*
CAS No.: 7647-14-5

Substance rating: No criteria for classification or naming of chemical is not required.
Chemical Formula: NaCl
Synonyms (de): Kochsalz
REACH Reg. No.: exempt, Annex V
EC No.: 231-598-3
Concentration: 1 - <5 %
acc. GHS: The criteria for classification are not fulfilled.

Substance name: *chemicals/mixture until 2%*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Concentration: 1 - <2 %
acc. GHS: The criteria for classification are not fulfilled.

30 mL MI5

Substance name: *chemicals/mixture until 1%*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Concentration: 0,1 - <1 %
acc. GHS: The criteria for classification are not fulfilled.

1,5 mL B-Beads

Substance name: *magnetic particles, suspended in water*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Synonyms (de): magnetic beads
Concentration: 1 - <15 %
acc. GHS: The criteria for classification are not fulfilled.

25 mL MIc

Substance name: *acetate buffer solution*
CAS No.: -

Substance rating: No criteria for classification or naming of chemical is not required.
Chemical Formula: CH₃ COOH/K/Na•H₂O
Concentration: 45 - <60 %
acc. GHS: The criteria for classification are not fulfilled.

200 mL MI3



Safety Data Sheet

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REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 6/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

Substance name: *triethanolamine*
CAS No.: 102-71-6

Substance rating: H315, Skin Irrit. 2, H319, Eye Irrit. 2
Chemical Formula: C₆H₁₅NO₃
Synonyms (de): 2,2',2"-Nitrilotriethanol, TEA, Tris(2-hydroxyethyl)amin
REACH Reg. No.: 01-2119486482-31-xxxx

Dual-use: The application of this chemical is exempt from the regulation 2017/2268/EU (see IC350 remark 4).

EC No.: 203-049-8
Concentration: 1 - <10 %

acc. GHS: The criteria for classification are not fulfilled.

Substance name: *2-propanol*
CAS No.: 67-63-0

Substance rating: H225, Flam. Liq. 2, H319, Eye Irrit. 2, H336, STOT SE 3
Chemical Formula: C₃H₈O
Synonyms (de): Isopropanol, IPA, Propan-2-ol
REACH Reg. No.: 01-2119457558-25-XXXX

EC No.: 200-661-7
Concentration: 35 - <50 %

Indice No.: 603-117-00-0

acc. GHS: H226, Flam. Liq. 3, H319, Eye Irrit. 2, H336, STOT SE 3

40 mL MI2

Substance name: *ethyleneglycol diacetate*
CAS No.: 111-55-7

Substance rating: No criteria for classification or naming of chemical is not required.
Chemical Formula: C₆H₁₀O₄
Synonyms (de): 1,2-Diacetoxyethan, Ethylendiacetat

REACH Reg. No.: 01-2119969454-26-xxxx
EC No.: 203-881-1

Concentration: 50 - <80 %

acc. GHS: The criteria for classification are not fulfilled.

Substance name: *polyoxyethylene sorbitan monolaurate (Tween® 20)*
CAS No.: 9005-64-5

Substance rating: No criteria for classification or naming of chemical is not required.
Chemical Formula: C₅₈H₁₁₄O₂₆

Synonyms (de): E432

Concentration: 33 - <45 %

acc. 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 Hazard and Precaution phrases: see section 16.2.

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 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 Vapors

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



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SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 7/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

- 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**

Causes serious eye irritation.
- 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 substance. Further treatment must to be carried out by an eye specialist. ---

SECTION 5: Fire-Fighting Measures

- 5.1 **Extinguishable Media**
 - 5.1.1 **Suitable 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.
 - 5.1.2 **Unsuitable extinguishing media**
data not available
- 5.2 **Special Hazards arising from the Substance or Mixture**
WARNING: Flammable. May form explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible.
- 5.3 **Advice for Firefighters**
No, for listed product. The substance/mixture is flammable. Product package burns like paper or plastic. Cool any undamaged containers in water, and remove from the danger zone if possible. Heating will lead to an increase in pressure, and a danger of bursting.
- 5.4 **Additional Information**

SECTION 6: Accidental Release Measures

- 6.1 **Personal Precautions, Protective Equipment and Emergency Procedure**
Do not breathe vapors. Wear eye protection. Keep product away from sources of ignition - No smoking. Regular staff training is necessary.
- 6.2 **Environmental Precautions**
PBT: not applicable
vPvB: not applicable
- 6.3 **Methods and Material for Containment and Cleaning up**
Bind any escaping liquid with inert absorbent.
Collect small amounts of leaked liquid and flush with water into sewer.
- 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 allows a safe storage. Storage class (German chemical industry): see chapter 12.1
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.



Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 8/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

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SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

125 mL MI4

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

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

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: 1000 ppm / 1900 mg/m³

10 mL SX

Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4

DNEL: 1.5 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 2.2 mg/L
PNEC = Predicted No Effect Concentration

125 mL MI1

Chemical: *sodium chloride* CAS No.: 7647-14-5

Chemical: *chemicals/mixture until 2%* CAS No.: -

30 mL MI5

Chemical: *chemicals/mixture until 1%* CAS No.: -

1,5 mL B-Beads

Chemical: *magnetic particles, suspended in water* CAS No.: -

25 mL Mic

Chemical: *acetate buffer solution* CAS No.: -

200 mL MI3

Chemical: *triethanolamine* CAS No.: 102-71-6

DNEL: [derm] 6.3; [inh] 5 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 0.32 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

Chemical: *2-propanol* CAS No.: 67-63-0

DNEL: [inh] 500 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC (fresh water): 140.9 mg/L
PNEC = Predicted No Effect Concentration

NIOSH: [TWA] 400 ppm / 980 mg/m³
NIOSH STEL: 500 ppm / 1225 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 400 ppm / 980 mg/m³



Safety Data Sheet

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REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 9/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

40 mL MI2

Chemical: *ethyleneglycol diacetate*

CAS No.: 111-55-7

Chemical: *polyoxyethylene sorbitan monolaurate (Tween® 20)*

CAS No.: 9005-64-5

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 Skin protection / Hand protection

Yes, gloves (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical resistant Latex gloves f.ex. with code EN 374-3 level 1.

8.2.3 Eye / Face Protection

Yes, Splash Goggles.

8.2.4 Skin Protection

Recommended.

8.2.5 Hygiene Measures

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.

8.2.6 Thermal hazards

data not available

8.3 Limitation and monitoring of environmental exposure

Do not release product into environment.

SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

125 mL MI4

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	alcoholic
d) Melting Point:	data not available
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	26 °C
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	5-7
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	data not available
n) Partition Coefficient (o/w) :	data not available
o) Vapor Pressure (68°F):	data not available
p) Specific Gravity:	1.0 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

10 mL SX

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	odorless
d) Melting Point:	data not available
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	7-8



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 10/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

l) Kinematic Viscosity:	data not available
m) Soluble in Water:	data not available
n) Partition Coefficient (o/w) :	data not available
o) Vapor Pressure (68°F):	data not available
p) Specific Gravity:	data not available
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

125 mL MI1

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	odorless
d) Melting Point:	data not available
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	data not available
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	data not available
n) Partition Coefficient (o/w) :	data not available
o) Vapor Pressure (68°F):	data not available
p) Specific Gravity:	data not available
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

30 mL MI5

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	odorless
d) Melting Point:	0 °C
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	8-9
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	data not available
n) Partition Coefficient (o/w) :	data not available
o) Vapor Pressure (68°F):	data not available
p) Specific Gravity:	1.0 g/cm ³
q) Relative Vapor Density (air=1) :	data not available
r) Particle Size:	data not available

1,5 mL B-Beads

a) State of aggregation:	liquid
b) Color:	colorless
c) Odor:	odorless
d) Melting Point:	data not available
e) Boiling Point:	data not available
f) Flammability:	data not available
g) Explosive Limits (lower / upper):	data not available
h) Flash Point:	data not available
i) Autoignition Temperature:	data not available
j) Decomposition Temperature:	data not available
k) pH Value:	data not available
l) Kinematic Viscosity:	data not available
m) Soluble in Water:	data not available
n) Partition Coefficient (o/w) :	data not available
o) Vapor Pressure (68°F):	data not available



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 11/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

p) Specific Gravity: data not available
 q) Relative Vapor Density (air=1) : data not available
 r) Particle Size: data not available

25 mL Mic

a) State of aggregation: liquid
 b) Color: colorless
 c) Odor: acetic
 d) Melting Point: data not available
 e) Boiling Point: data not available
 f) Flammability: data not available
 g) Explosive Limits (lower / upper): data not available
 h) Flash Point: data not available
 i) Autoignition Temperature: data not available
 j) Decomposition Temperature: data not available
 k) pH Value: 5-6
 l) Kinematic Viscosity: data not available
 m) Soluble in Water: data not available
 n) Partition Coefficient (o/w) : data not available
 o) Vapor Pressure (68°F): data not available
 p) Specific Gravity: 1.19 g/cm³
 q) Relative Vapor Density (air=1) : data not available
 r) Particle Size: data not available

200 mL MI3

a) State of aggregation: liquid
 b) Color: colorless
 c) Odor: alcoholic
 d) Melting Point: data not available
 e) Boiling Point: data not available
 f) Flammability: data not available
 g) Explosive Limits (lower / upper): data not available
 h) Flash Point: 24 °C
 i) Autoignition Temperature: data not available
 j) Decomposition Temperature: data not available
 k) pH Value: 5.5-6.5
 l) Kinematic Viscosity: data not available
 m) Soluble in Water: 0-100 %
 n) Partition Coefficient (o/w) : data not available
 o) Vapor Pressure (68°F): data not available
 p) Specific Gravity: 0.94 g/cm³
 q) Relative Vapor Density (air=1) : data not available
 r) Particle Size: data not available

40 mL MI2

a) State of aggregation: liquid
 b) Color: colorless
 c) Odor: odorless
 d) Melting Point: data not available
 e) Boiling Point: data not available
 f) Flammability: data not available
 g) Explosive Limits (lower / upper): data not available
 h) Flash Point: data not available
 i) Autoignition Temperature: data not available
 j) Decomposition Temperature: data not available
 k) pH Value: data not available
 l) Kinematic Viscosity: data not available
 m) Soluble in Water: data not available
 n) Partition Coefficient (o/w) : data not available
 o) Vapor Pressure (68°F): data not available
 p) Specific Gravity: 1.09 g/cm³
 q) Relative Vapor Density (air=1) : data not available
 r) Particle Size: data not available



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 12/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

9.2 Further Information

No data is available for the other parameters for the mixtures, since no registration and no chemical safety report is required.
Properties relevant to substance groups

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

But avoid reactions with oxidizing agents. Can form very reactive substances with oxidizing agents. No further data available.

10.4 Conditions to avoid

But formation of explosive gases/vapours with air is possible. Use only in well ventilated rooms. No more required.

10.5 Incompatible Materials

Avoid storage with oxidizing substances. ---

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 chemicals. Quantitative data on the toxicity of this product are not available.

125 mL MI4

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1
 TSCA Inventory: listed California Prop. 65 List: not listed
 Canada CEPA 1999: DSL yes
 LD50 orl rat : 475-907 mg/kg
 LC50 ihl rat : 3181-7655 µg/m³/4H

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 Prop. 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
 Canada CEPA 1999: DSL yes
 LD50 orl rat : 6200 mg/kg
 LC_Low ihl gpg : 21,900 mg/L
 LC_Low orl hmn : 1400 mg/kg
 LC50 ihl mus : 123,4 mg/L/4H
 LC50 ihl rat : 115,9-133,8 mg/L/4H
 LD50 orl mus : 3450 mg/kg

10 mL SX

Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4
 TSCA Inventory: listed
 LD50 orl rat : 2000-4500 mg/kg

125 mL MI1

Chemical: *sodium chloride* CAS No.: 7647-14-5
 TSCA Inventory: listed
 LD50 orl rat : 3000 mg/kg



Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 13/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

Chemical:	<i>chemicals/mixture until 2%</i>	CAS No.: -
TSCA Inventory:	all listed, <2%	
30 mL MI5		
Chemical:	<i>chemicals/mixture until 1%</i>	CAS No.: -
TSCA Inventory:	all listed, <1%	
1,5 mL B-Beads		
Chemical:	<i>magnetic particles, suspended in water</i>	CAS No.: -
TSCA Inventory:	listed (CAS 1309-38-2)	
25 mL Mic		
Chemical:	<i>acetate buffer solution</i>	CAS No.: -
TSCA Inventory:	all listed	
200 mL MI3		
Chemical:	<i>triethanolamine</i>	CAS No.: 102-71-6
TSCA Inventory:	listed	California Prop. 65 List: not listed
Canada CEPA 1999:	DSL Yes	
LD50 orl rat :	> 5000 mg/kg	
Chemical:	<i>2-propanol</i>	CAS No.: 67-63-0
TSCA Inventory:	listed	California Prop. 65 List: not listed
ACGIH:	1230 ppm	
Exposure Routes:	inhalation, ingestion, skin and/or eye contact	
Target Organs:	Eyes, skin, respiratory system	
Symptoms:	irritation eyes, nose, throat; drowsiness, dizziness, headache; dry cracking skin; in animals: narcosis	
Canada CEPA 1999:	DSL yes	
LD50 orl rat :	5045 mg/kg	
LC ₅₀ Low orl hmn :	3570 mg/kg	
LC50 ihl rat :	25 mg/L/4H	
40 mL MI2		
Chemical:	<i>ethyleneglycol diacetate</i>	CAS No.: 111-55-7
TSCA Inventory:	listed	
LD50 orl rat :	6850 mg/kg	
Chemical:	<i>polyoxyethylene sorbitan monolaurate (Tween® 20)</i>	CAS No.: 9005-64-5
TSCA Inventory:	listed	
LC50 ihl rat :	5,1 mg/L/4H	

11.2 Other Hazards

Possible endocrine disrupting effects

data not available

Other Information

no additional data available

SECTION 12: Ecological Information

12.1 Toxicity

Following information is valid for pure chemicals.

125 mL MI4		
Chemical:	<i>guanidine hydrochloride</i>	CAS No.: 50-01-1
PNEC (fresh water) :	-	
PNEC = Predicted No Effected Concentration		
LC50 leuciscus idus/96h :	1759 mg/L	
LC50 fish/96h :	[4d] 690-1850; [48h] 1758-2420 mg/L	
EC50 daphnia/48h :	70.2 mg/L	
EC10 pseudomonas putita/16h :	[72h] 11.8-33.5 mg/L	
Chemical:	<i>ethanol</i>	CAS No.: 64-17-5
PNEC (fresh water) :	0.96 mg/L	
PNEC = Predicted No Effected Concentration		
LC50 daphnia magna/48h :	>100 g/L	



Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 14/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

LC50 pimephales promelas/96h : 13.4-15.1 g/L
 LC50 leuciscus idus/96h : [48h] 8.14 g/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 putita/16h : [EC5] 6500 mg/L
 Partition Coefficient (o/w) : -0,31

10 mL SX

Chemical: *ethylendinitrilo tetraacetic acid (EDTA)* CAS No.: 60-00-4
 PNEC (fresh water) : 2.2 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 daphnia magna/48h : [48h] 140 mg/L
 LC50 fish/96h : [4d] 41-1592 mg/L
 EC50 daphnia/48h : [24h] 480-790 mg/L
 EC10 pseudomonas putita/16h : [72h] 2.77-1000 mg/L
 Partition Coefficient (o/w) : -5,01-0,13

125 mL MI1

Chemical: *sodium chloride* CAS No.: 7647-14-5

Chemical: *chemicals/mixture until 2%* CAS No.: -

30 mL MI5

Chemical: *chemicals/mixture until 1%* CAS No.: -

1,5 mL B-Beads

Chemical: *magnetic particles, suspended in water* CAS No.: -

25 mL MIc

Chemical: *acetate buffer solution* CAS No.: -

200 mL MI3

Chemical: *triethanolamine* CAS No.: 102-71-6
 PNEC (fresh water) : 0.32 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h : >1000 mg/L
 EC50 daphnia/48h : >1000 24h mg/L
 Partition Coefficient (o/w) : -2,3

Chemical: *2-propanol* CAS No.: 67-63-0

PNEC (fresh water) : 140.9 mg/L
 PNEC = Predicted No Effect Concentration
 LC50 fish/96h : 1400 mg/L
 EC50 daphnia/48h : 13.3 g/L
 IC50 scenedesmus quadricauda/72h : >1000 mg/L
 EC10 pseudomonas putita/16h : EC5: 1050 mg/L
 Partition Coefficient (o/w) : 0,05

40 mL MI2

Chemical: *ethyleneglycol diacetate* CAS No.: 111-55-7

Chemical: *polyoxyethylene sorbitan monolaurate (Tween® 20)* CAS No.: 9005-64-5

12.2 Persistence and Degradability

not necessary

12.3 Bioaccumulative Potential

not necessary

12.4 Mobility in Soil



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 15/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

not necessary

12.5 Results of PBT and vPvB Assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

12.6 Endocrine disrupting properties

data not available

12.7 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 (RCRA Code D002/D003, EU 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

14.1. UN/NA: 1993 **14.2. Proper Shipping Name:** Flammable liquid, n.o.s. (2-propanol, ethanol mixture)

14.3. Hazard Class: 3 **14.4. Packing Group:** III

Transportation by Road

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Air Transportation

Limited Quantity: LQ 7

Excepted Quantity: E 1

PAX: 355

CAO: 366

Maritime Transport

EmS: F-E, S-E

Tunnel restriction code: D/E

Special instructions: 640E

max. weight PAX: 60 L

max. weight CAO: 220 L

Storage Category: A

14.5 Environmental Hazards

none, contains only small quantities of hazardous substances

14.6 Special Precautions for User

not necessary

14.7 Carriage of bulk cargo by sea in accordance with IMO instruments

Not applicable.

SECTION 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

U.S. Federal Regulations

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"

<https://www.osha.gov/dsg/hazcom/ghs.html>

29 CFR 1910.1200 Hazard communication.

NIOSH Pocket Guide to Chemical Hazards

NIOSH Workplace Safety & Health Topics

TSCA Inventory

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

Canada

Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

MN Leaflet/User manual, also see www.mn-net.com

15.2 Chemical Safety Assessment

not necessary for these small amounts



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1

NucleoMag DNA Microbiome (1x96)

Page: 16/18

Printing Date: 04.04.2023

Date of Issue: 03.03.2023

Version: 2.3.6.12

SECTION 16: Other Information

16.1 Changes compared to the last version

Between versions 2.3.6.12 and 2.2.2.2 following changes were applied: - 1 product component data corrected - 4 composition data corrected - 10 substance data corrected

16.2 List of Hazard and Precaution Phrases

16.2.1 List of relevant H Phrases

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

16.2.2 List of relevant P Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260D	Do not breathe vapors.
P280sh	Wear protective gloves/eye protection.

16.3 Recommended Restriction on Use

Only for Professional User.

An individual package of this product or test kit has a moderate hazardous potential.

16.4 Sources of Key Data

KÜHN, BIRETT, Leaflets on hazardous materials, 2021

Directive 1999/92/EG Minimum requirements to improve the safety and health protection of workers at risk from potentially explosive atmospheres

SUVA .CH, limit values in the air at work 2009, revised on 01/2009

Regulation 790/2009/EU, adaptation of Regulation 1272/2008/EU to technical and scientific progress (1st ATP)

Regulation 453/2010/EU, adaptation of the REACH regulation 1907/2006/EG

Regulation 487/2013/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (4th ATP)

Regulation 1221/2015/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (7th ATP)

Regulation 776/2017/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (10th ATP)

Regulation 669/2018/EU, adaptation of Regulation 1272/2008/EC to technical and scientific progressText (11th ATP)

Regulation 1480/2018/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (13th ATP)

Regulation 521/2019/EU, adaptation of regulation 1272/2008/EG to technical and scientific progress (12th ATP)

TRGS 900, German rules of technology on limit values in the air at work, as of 03/2019

Regulation 217/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (14th ATP)

Regulation 878/2020/EU, adaptation of Annex II of the REACH regulation 1907/2006/EG

Regulation 1182/2020/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (15th ATP)

Regulation 643/2021/EU, adaptation of Annex VI, Part 1, of Regulation 1272/2008/EC to technical and scientific progress (16th ATP)

Regulation 849/2021/EU, adaptation of Annex VI, Part 3, of Regulation 1272/2008/EC to technical and scientific progress (17th ATP)

revisions/updates

Reason for revision: 2014-02 Corrected structure of the sections according to Regulation 453/2010/EU, if necessary

2014-04 adjustment according Regulation 487/2013/EU

2016-03 adjustment according Regulation 1221/2015/EU

2017-08 adjustment according the Ordinance on Ethanol Denaturation 2016/1867/EU

2017-11 adjustment according the ECHA registration dossier

2022-11 adjustment according Regulation 878/2020/EU

16.5 Further Information

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16.6 Legend / Abbreviations

acc:	according
ADR:	Convention concerning the International Carriage of Dangerous Goods by Road
Act:	acute
BAT:	biological workplace tolerance value
CAO:	Cargo Aircraft Only
Carc:	carcinogen



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Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 17/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

CAS:	Chemical Abstracts Service
CLP:	Classification, Labelling and Packaging regulation
CMR:	carcinogen, mutagen, reproduction toxic
Corr:	corrosive
COD:	chemical oxygen demand
CSCL:	Chemical Substance Control Law (Jp)
Dam:	damage
DNEL:	Derived No-Effect Level (for workers)
derm:	dermal
dog:	dog
EC10:	Concentration causing a toxic effect in 10% of the test organisms
EC:	European Community
EC-Nr:	Substance number of the EC substance inventory
EmS:	Guide to accident management measures on ships
EU:	European Union
fish:	fish (not specified)
GHS:	Global Harmonized System of Classification and Labeling of Chemicals
gpg:	guinea pig
ICAO:	International Civil Aviation Organization
ihl:	inhaled
IMDG:	International Maritime Dangerous Goods Code
intrav:	intravenous
ipt:	intraperitoneal
ISHL:	Industrial Safety and Health Law (Jp)
LC50:	letale concentration 50%
LD50:	letale dosis 50%
leuciscus idus:	fisch, ide, orfe
MAK:	maximum workplace concentration
Met:	Metall
mus:	mouse
Muta:	mutagen
NIOSH:	National Institute for Occupational Safety and Health (US)
NRD:	Non-rapidly degradable
onchorhynchus mykiss:	fisch, rainbow trout
orl:	oral
OSHA:	Occupational Safety and Health Administration
PAX:	transport on passenger planes allowed
PBT:	persistent, bioaccumulating, toxic substance
pH:	pH value
pimephales promelas:	fisch, fathead minnow
PNEC:	Predicted No Effect Concentration
PROC 15:	Process category 'for laboratory use'
PRTR:	Law for PRTR and Promotion of Chemical Management (Jp)
PVC:	polyvinyl chloride
quail:	bird, quail
rat:	rat
rbt:	rabbit
RD:	rapidly degradable
RE:	repeated
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
REF:	item number, reference number
Reg.No.:	rRegistration number
Repr:	harmful to reproduction
Resp:	respiratory
scu:	sub cutan
RIP:	REACH Implementations Projects
SDS:	safety data sheet
Sens:	sensitisation
STEL:	short term exposure limit
STOT:	Specific Target Organ Toxicity
SVHC:	Substance of Very High Concern
t/a:	tons per year
TCCA:	Toxic Chemicals Control Act (S. Korea)
Tox:	toxic
TSCA:	The Toxic Substances Control Act (US)
TWA:	time weighted average
TRGS:	technical regulations (DE)
vPvB:	very persistent, very bioaccumulating substance



Safety Data Sheet

SDS acc. Hazard Communication Standard

REF: 744330.1	NucleoMag DNA Microbiome (1x96)	Page: 18/18
Printing Date: 04.04.2023	Date of Issue: 03.03.2023	Version: 2.3.6.12

16.7 Training Advice

Regular safety training. 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.



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