

Safety Data Sheet

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

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

1.1 Product identifier

REF NADI003-XL
Product name ADIAMAG XL (Bio-X Diagnostics)

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 12 mL ADIAMAG Beads
1 x 500 mL B2
1 x 15 mL BPK
1 x 125 mL E6
1 x 100 mL LB1
1 x 125 mL LB2
4 x 75 mg Proteinase K (Iyo)
1 x 300 mL W3
1 x 300 mL W4

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:

Bio-X Diagnostics S.A.
Rue de la Calestienne, 38 (PAE), 5580 Rochefort, Belgium
Tel. +32 (0) 84 32 23 77

Mail: info@biox.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

SECTION 2: Hazard identification

2.0 Classification of the complete product



GHS02



GHS07



GHS08

Signal word

DANGER

Hazard identification

H226
H302
H315
H319
H334

Hazard classes/categories

Flam. Liq. 3
Acute Tox. 4 oral
Skin Irrit. 2
Eye Irrit. 2
Resp. Sens. 1

Safety Data Sheet

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

2.1 Classification of the substance or mixture

12 mL ADIAMAG Beads

Signal word

Do not need labelling as hazardous

-

No hazard class

500 mL B2



GHS02

GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H226

Flam. Liq. 3

H302

Acute Tox. 4 oral

15 mL BPK

Signal word

Do not need labelling as hazardous

-

No hazard class

125 mL E6

Signal word

Do not need labelling as hazardous

-

No hazard class

100 mL LB1

Signal word

Do not need labelling as hazardous

-

No hazard class

125 mL LB2



GHS07

Signal word

WARNING

Hazard identification

Hazard classes/categories

H302

Acute Tox. 4 oral

H315

Skin Irrit. 2

H319

Eye Irrit. 2

Safety Data Sheet

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

4 x 75 mg Proteinase K (lyo)



GHS07



GHS08

Signal word

DANGER

Hazard identification

H315
H319
H334

Hazard classes/categories

Skin Irrit. 2
Eye Irrit. 2
Resp. Sens. 1

300 mL W3



GHS02



GHS07

Signal word

WARNING

Hazard identification

H226
H302

Hazard classes/categories

Flam. Liq. 3
Acute Tox. 4 oral

300 mL W4



GHS02



GHS07

Signal word

WARNING

Hazard identification

H226
H302

Hazard classes/categories

Flam. Liq. 3
Acute Tox. 4 oral

Safety Data Sheet

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

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.

12 mL ADIAMAG Beads

Do not need labelling as hazardous Signal word: -

125 mL B2



GHS02 GHS07

Signal word: WARNING

H226, H302

Flammable liquid and vapor. Harmful if swallowed.

P210, P264W, P301+312, P330

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wash with water thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

15 mL BPK

Do not need labelling as hazardous Signal word: -

125 mL E6

Do not need labelling as hazardous Signal word: -

100 mL LB1

Do not need labelling as hazardous Signal word: -

125 mL LB2



GHS07

Signal word: WARNING

1-75 mg Proteinase K (lyo)



GHS07 GHS08

Signal word: DANGER

H334

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

P261sh, P342+311

Avoid breathing dust/vapors. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. 75 mL

Safety Data Sheet

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

300 mL W3



GHS02



GHS07

Signal word: WARNING

300 mL W4



GHS02



GHS07

Signal word: WARNING

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. Vapor forms explosive mixtures with air. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 "Causes severe skin burns and eye damage. Harmful if inhaled." are not relevant, because the mixture solution is buffered to pH 4-9 (see GHS Directive 1272/2008/EC Annex I, chapter 3.2.3.1.2.). ---

Information pertaining to particular risks to human and possible symptoms

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

12 mL ADIAMAG Beads

Chemical: *magnetic particles, suspended in water*

CAS No.: -

Classification: No criteria for classification or naming of chemical not required.

TSCA Inventory: listed (CAS 1309-38-2)

Concentration: 1 - <15 %

acc. CLP (GHS): The criteria for classification are not fulfilled.

500 mL B2

Chemical: *ethanol*
(denatured with 1%IPA/1%MEK, acc.2016/1867/EU)

CAS No.: 64-17-5

Classification: H225, Flam. Liq. 2

Formula: C₂ H₆ O; C₂ H₅ OH

Pseudonym: ethyl alcohol, methylated spirit

TSCA Inventory: listed

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

EC No.: 200-578-6

Indice No.:

603-002-00-5

RTECS: KQ6300000

MFCD:

00003568

KE No.: KE-13217

Concentration: 35 - <55 %

acc. CLP (GHS): H226, Flam. Liq. 3

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

Classification: H271, Ox. Sol. 1, H302, Acute Tox. 4 oral

Formula: NaClO₄

TSCA Inventory: listed

REACH Reg. No.: 01-2119540521-50-xxxx

EC No.: 231-511-9

Indice No.:

017-010-00-6

RTECS: SC9800000

MFCD:

-

KE No.: KE-31569

Concentration: 15 - <40 %

acc. CLP (GHS): H302, Acute Tox. 4 oral

Safety Data Sheet

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

15 mL BPK

Chemical:	<i>glycerole</i>	CAS No.:	56-81-5
Classification:	No criteria for classification or naming of chemical not required.		
Formula:	$C_3H_8O_3$		
Pseudonym:	glycerin, 1,2,3-propanetriol		
TSCA Inventory:	listed (1,2,3-Propanetriol)		
REACH Reg. No.:	01-2119471987-18-xxxx		
EC No.:	200-289-5	Indice No.:	n/a
RTECS:	MA8050000	MFCD:	00004722
KE No.:	KE-29297		
Concentration:	10 - <50 %		
acc. CLP (GHS):	The criteria for classification are not fulfilled.		

125 mL E6

Chemical:	<i>chemicals/mixture < 1%</i>	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 LB1

Chemical:	<i>chemicals/mixture < 2%</i>	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.		

125 mL LB2

Chemical:	<i>guanidine hydrochloride</i>	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:	50 - <66 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2		

4 x 75 mg Proteinase K (Iyo)

Chemical:	<i>proteinase K (origin: tritirachium album)</i>	CAS No.:	39450-01-6
Classification:	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		
Formula:	Enzyme Comm. No. 3.4.21.64, origin: tritirachium album		
TSCA Inventory:	listed (CAS 102925-54-2)		
EC No.:	254-457-8	Indice No.:	647-014-00-9
RTECS:	-	MFCD:	00132129
KE No.:	not listed		
Concentration:	90 - <100 %		
acc. CLP (GHS):	H315, Skin Irrit. 2, H319, Eye Irrit. 2, H334, Resp. Sens. 1		

300 mL W3

Chemical:	<i>ethanol</i> (denaturated with 1%IPA/1%MEK, acc.2016/1867/EU)	CAS No.:	64-17-5
Classification:	H225, Flam. Liq. 2		
Formula:	C_2H_6O ; C_2H_5OH		
Pseudonym:	ethyl alcohol, methylated spirit		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119457610-43-xxxx		
EC No.:	200-578-6	Indice No.:	603-002-00-5
RTECS:	KQ6300000	MFCD:	00003568
KE No.:	KE-13217		
Concentration:	20 - <35 %		
acc. CLP (GHS):	H226, Flam. Liq. 3		
Chemical:	<i>sodium perchlorate</i>	CAS No.:	7601-89-0
Classification:	H271, Ox. Sol. 1, H302, Acute Tox. 4 oral		
Formula:	$NaClO_4$		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119540521-50-xxxx		

Safety Data Sheet

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

EC No.:	231-511-9	Indice No.:	017-010-00-6
RTECS:	SC9800000	MFCD:	-
KE No.:	KE-31569		
Concentration:	15 - <40 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral		

300 mL W4

Chemical:	<i>ethanol</i> (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)	CAS No.:	64-17-5
Classification:	H225, Flam. Liq. 2		
Formula:	C ₂ H ₆ O; C ₂ H ₅ OH		
Pseudonym:	ethyl alcohol, methylated spirit		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119457610-43-xxxx		
EC No.:	200-578-6	Indice No.:	603-002-00-5
RTECS:	KQ6300000	MFCD:	00003568
KE No.:	KE-13217		
Concentration:	20 - <35 %		
acc. CLP (GHS):	H226, Flam. Liq. 3		
Chemical:	<i>sodium perchlorate</i>	CAS No.:	7601-89-0
Classification:	H271, Ox. Sol. 1, H302, Acute Tox. 4 oral		
Formula:	NaClO ₄		
TSCA Inventory:	listed		
REACH Reg. No.:	01-2119540521-50-xxxx		
EC No.:	231-511-9	Indice No.:	017-010-00-6
RTECS:	SC9800000	MFCD:	-
KE No.:	KE-31569		
Concentration:	15 - <40 %		
acc. CLP (GHS):	H302, Acute Tox. 4 oral		

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 vapors

After inhalation of foam or vapor fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function. ---

4.1.4 After ORAL Intake

After oral intake lots of water with activated charcoal supplement 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

WARNING: Flammable (GHS regulation). May form explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air

Safety Data Sheet

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

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. Spray any vapors released with water. Retent fire water. Use only acid-resistant safety equipment. For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

5.4 Additional information

Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances. ---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapors. Wear suitable protective gloves (see 8.2.2). Keep product away from sources of ignition - No smoking. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

6.2 Environmental precautions

not necessary, contains only small amounts of these substances

6.3 Methods and material for containment and cleaning up

Bind any escaping liquid with inert absorbent. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.

6.4 Reference to other sections

see information in section 5.4 ---

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 allows a safe storage.

Storage class (VCI): 3

Water hazard class (DE): 3

7.2.1 Requirements for stock rooms and containers

Keep original product packages tightly closed during handling and storage.

7.3 Specific end use(s)

Product for analytical use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

12 mL ADIAMAG Beads

Chemical: *magnetic particles, suspended in water*

CAS No.: -

500 mL B2

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³

DNEL = Derived No-Effect Level (for workers)

PNEC(fresh water): 0.96 mg/L

PNEC = Predicted No Effect Concentration

TRGS 900 (DE): 200 mL/m³ / 380 mg/m³

E/e respirable

Short-term exposure factor: 4 (II), Y

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm / 960 mg/m³

NIOSH: [TWA] 1000 ppm / 1900 mg/m³

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / 1900 mg/m³

Chemical: *sodium perchlorate*

CAS No.: 7601-89-0

DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m³

DNEL = Derived No-Effect Level (for workers)

Safety Data Sheet

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

TRGS 900 (DE): -
E/e respirable
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

15 mL BPK

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

125 mL E6

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

100 mL LB1

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

125 mL LB2

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

4 x 75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)* CAS No.: 39450-01-6
SUVA(CH) MAK value: 0,00006_{15min} mg/m³

300 mL W3

Chemical: *ethanol* CAS No.: 64-17-5
DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water): 0.96 mg/L
PNEC = Predicted No Effect Concentration
TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
E/e respirable
Short-term exposure factor: 4 (II), Y
skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded
SUVA(CH) MAK value: 500 ppm / 960 mg/m³
NIOSH: [TWA] 1000 ppm / 1900 mg/m³
[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
OSHA: [TWA] 1000 ppm / 1900 mg/m³

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m³
DNEL = Derived No-Effect Level (for workers)
TRGS 900 (DE): -
E/e respirable
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

300 mL W4

Chemical: *ethanol* CAS No.: 64-17-5
DNEL: [derm] 343 mg/kg; [inh] 950 mg/m³
DNEL = Derived No-Effect Level (for workers)
PNEC(fresh water): 0.96 mg/L
PNEC = Predicted No Effect Concentration
TRGS 900 (DE): 200 mL/m³ / 380 mg/m³
E/e respirable
Short-term exposure factor: 4 (II), Y

Safety Data Sheet

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

skin resorptive (H), respiratory sensitizable (Sa), skin sensitizable (Sh), teratogenic (Z) not securely excluded / (Y) certainly excluded

SUVA(CH) MAK value: 500 ppm / 960 mg/m³
 NIOSH: [TWA] 1000 ppm / 1900 mg/m³
 [TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period
 OSHA: [TWA] 1000 ppm / 1900 mg/m³

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
 DNEL: [derm] 2.16 mg/kg bw/day; [inh] 0.28 mg/m³
 DNEL = Derived No-Effect Level (for workers)
 TRGS 900 (DE): -
 E/e respirable
 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

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

12 mL ADIAMAG Beads

Appearance: liquid Color: colorless Odor: odorless

500 mL B2

Appearance: liquid Color: colorless Odor: alcoholic
 pH: 5-6
 Flash point: 24 °C
 Specific gravity: 1.08 g/cm³

15 mL BPK

Appearance: liquid Color: colorless Odor: alcoholic
 Specific gravity: 1.11 g/cm³

125 mL E6

Appearance: liquid Color: colorless Odor: odorless
 pH: 8-9
 Specific gravity: 1.0 g/cm³

100 mL LB1

Appearance: liquid Color: colorless Odor: odorless
 pH: 7.5-8.5
 Specific gravity: 1.02 g/cm³

125 mL LB2

Appearance: liquid Color: colorless Odor: odorless
 pH: 4.5-5.2
 Specific gravity: 1.18 g/cm³

4 x 75 mg Proteinase K (lyo)

Appearance: solid (lyoph.) Color: slightly grey Odor: odorless

300 mL W3

Appearance: liquid Color: colorless Odor: alcoholic
pH: 4.5-5.5
Flash point: 26 °C
Specific gravity: 1.06 g/cm³

300 mL W4

Appearance: liquid Color: colorless Odor: alcoholic
pH: 4.5-5.5
Flash point: 26 °C
Specific gravity: 1.06 g/cm³

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

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. Note: Can form very reactive substances with oxidizing agents. Possible: Contact with acids liberates toxic gas. No further data available.

10.4 Conditions to avoid

Not necessary. But can form explosive gases/vapor with air. Use only in a well-ventilated working areas. ---

10.5 Incompatible materials

Avoid contact with strong acids or alkalines. Avoid storage with oxidising 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 substances. Quantitative data on the toxicity of this product are not available.

12 mL ADIAMAG Beads

Chemical: *magnetic particles, suspended in water* CAS No.: -
TSCA Inventory: listed (CAS 1309-38-2)

500 mL B2

Chemical: *ethanol* CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough;
liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSC: not listed
Japan ISHL: listed ≥0,1%/≥0,1%, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{orl rat}: 6200 mg/kg

Safety Data Sheet

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

LC₅₀LowIhl gpg : 21.9 g/m³
 LC₅₀LowIhl hmn : 1400 mg/kg
 LC₅₀Ihl mouse : [4h] 39 g/m³
 LC₅₀Ihl rat : [10h] 20 g/m³
 LD₅₀drm rbt : 20 000 mg/kg
 LD₅₀oral mouse : 3450 mg/kg

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

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
 TSCA Inventory: listed California Proposition 65 List: not listed
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-31569
 LD₅₀orl rat : 2100 mg/kg
 LD₅₀ipr mus : 551 mg/kg
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

15 mL BPK

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
 LD₅₀orl rat : 12.6 g/kg
 LD₅₀drm rbt : >18.7 g/kg

TRGS 905 (DE): R_F C

125 mL E6

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

100 mL LB1

Chemical: *chemicals/mixture < 2%* CAS No.: -
 TSCA Inventory: all listed, <2%
 Korea Exist.Chem.Inventory: listed

125 mL LB2

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 PDSCL: not listed
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-18111
 LD₅₀orl rat : 475-907 mg/kg
 LC₅₀Ihl rat : [4h] 3181-7655 µg/m³
 LD₅₀drm rbt : 2000 mg/kg
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

4 x 75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)* CAS No.: 39450-01-6
 TSCA Inventory: listed (CAS 102925-54-2)
 Japan CSCL/PRTR: not listed
 Japan ISHL: not listed
 Korea Exist.Chem.Inventory: not listed
 Acute Effects: Cause after impairments of health when ingested in small quantities.
 Chronic Effects: May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma

300 mL W3

Chemical: *ethanol* CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed $\geq 0,1\%$ / $\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217
LD50_{oral rat}: 6200 mg/kg
LC_{Low} _{Wohl} _{gpg}: 21.9 g/m³
LC_{Low} _{Wohl} _{hmn}: 1400 mg/kg
LC50_{ihl mouse}: [4h] 39 g/m³
LC50_{ihl rat}: [10h] 20 g/m³
LD50_{drum} _{rbt}: 20 000 mg/kg
LD50_{oral mouse}: 3450 mg/kg
TRGS 905 (DE): K5, M5, R_F C

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
TSCA Inventory: listed California Proposition 65 List: not listed
Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: not listed
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-31569
LD50_{oral rat}: 2100 mg/kg
LD50_{ipr mus}: 551 mg/kg
Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

300 mL W4

Chemical: *ethanol* CAS No.: 64-17-5
TSCA Inventory: listed California Proposition 65 List: not listed
ACGIH: 1000 ppm
Exposure Routes: inhalation, ingestion, skin and/or eye contact
Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system
Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic
Australia NICNAS: not listed Canada CEPA 1999: DSL yes
Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
Japan ISHL: listed $\geq 0,1\%$ / $\geq 0,1\%$, Article 57-2 (SDS required)
South Korea TCCA: not listed
Korea Exist.Chem.Inventory: KE-13217

Safety Data Sheet

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

LD50_{orl rat} : 6200 mg/kg
 LC_{Low}hih_{gpg} : 21.9 g/m³
 LC_{Low}orl_{hmn} : 1400 mg/kg
 LC50_{ihl mouse} : [4h] 39 g/m³
 LC50_{ihl rat} : [10h] 20 g/m³
 LD50_{drm rbt} : 20 000 mg/kg
 LD50_{oral mouse} : 3450 mg/kg

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

Chemical: *sodium perchlorate* CAS No.: 7601-89-0
 TSCA Inventory: listed California Proposition 65 List: not listed
 Australia NICNAS: not listed Canada CEPA 1999: DSL Yes
 Japan CSCL/PRTR: not listed, Japan PDSCL: not listed
 Japan ISHL: not listed
 South Korea TCCA: not listed
 Korea Exist.Chem.Inventory: KE-31569
 LD50_{orl rat} : 2100 mg/kg
 LD50_{ipr mus} : 551 mg/kg
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

SECTION 12: Ecological information

12.1 Toxicity

Following information is valid for pure substances.

12 mL ADIAMAG Beads

Chemical: *magnetic particles, suspended in water*
 Storage class (VCI): 12

CAS No.: -

500 mL B2

Chemical: *ethanol*
 PNEC(fresh water) : 0.96 mg/L
 PNEC = Predicted No Effect Concentration
 LC50_{daphnia magna/48h} : >100 mg/L
 LC50_{pimephales promelas/96h} : 13400 - 15100 mg/L
 LC50_{leuciscus idus/96h} : [48h] 8140 mg/L
 LC50_{fish/96h} : 13 g/L
 EC50_{daphnia/48h} : 9.3-14.2 g/L
 IC50_{scenedesmus quadricauda/72h} : [7d] 5000 mg/L
 EC10_{pseudomonas putida/16h} : [EC5] 6500 mg/L
 Water hazard class (DE): 1 WGK No.: 0096
 Dispersion coefficient(octanol-water) : -0.31
 Storage class (VCI): 3

CAS No.: 64-17-5

Chemical: *sodium perchlorate*
 Water hazard class (DE): 1 WGK No.: 0382
 Storage class (VCI): 12

CAS No.: 7601-89-0

15 mL BPK

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

125 mL E6

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

CAS No.: -

Safety Data Sheet

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

100 mL LB1

Chemical: *chemicals/mixture < 2%*
 Water hazard class (DE): 1
 Storage class (VCI): 12-13

CAS No.: -

125 mL LB2

Chemical: *guanidine hydrochloride*
 PNEC(fresh water): -
 PNEC = Predicted No Effect Concentration
 LC50leuciscus idus/96h: 1759 mg/L
 LC50fish/96h: [4d] 690-1850; [48h] 1758-2420 mg/L
 EC50daphnia/48h: 70.2 mg/L
 EC10pseudomonas putita/16h: [72h] 11.8-33.5 mg/L
 Water hazard class (DE): 1 WGK No.: 0788
 Storage class (VCI): 12

CAS No.: 50-01-1

4 x 75 mg Proteinase K (Iyo)

Chemical: *proteinase K (origin: tritirachium album)*
 Water hazard class (DE): 1
 Storage class (VCI): 13

CAS No.: 39450-01-6

300 mL W3

Chemical: *ethanol*
 PNEC(fresh water): 0.96 mg/L
 PNEC = Predicted No Effect Concentration
 LC50daphnia magna/48h: >100 mg/L
 LC50pimephales promelas/96h: 13400 - 15100 mg/L
 LC50leuciscus idus/96h: [48h] 8140 mg/L
 LC50fish/96h: 13 g/L
 EC50daphnia/48h: 9.3-14.2 g/L
 IC50scenedesmus quadricauda/72h: [7d] 5000 mg/L
 EC10pseudomonas putita/16h: [EC5] 6500 mg/L
 Water hazard class (DE): 1 WGK No.: 0096
 Dispersion coefficient(octanol-water): -0.31
 Storage class (VCI): 3

CAS No.: 64-17-5

Chemical: *sodium perchlorate*
 Water hazard class (DE): 1 WGK No.: 0382
 Storage class (VCI): 12

CAS No.: 7601-89-0

300 mL W4

Chemical: *ethanol*
 PNEC(fresh water): 0.96 mg/L
 PNEC = Predicted No Effect Concentration
 LC50daphnia magna/48h: >100 mg/L
 LC50pimephales promelas/96h: 13400 - 15100 mg/L
 LC50leuciscus idus/96h: [48h] 8140 mg/L
 LC50fish/96h: 13 g/L
 EC50daphnia/48h: 9.3-14.2 g/L
 IC50scenedesmus quadricauda/72h: [7d] 5000 mg/L
 EC10pseudomonas putita/16h: [EC5] 6500 mg/L
 Water hazard class (DE): 1 WGK No.: 0096
 Dispersion coefficient(octanol-water): -0.31

CAS No.: 64-17-5

Safety Data Sheet

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

Storage class (VCI): 3

Chemical: *sodium perchlorate*

Water hazard class (DE): 1

Storage class (VCI): 12

WGK No.: 0382

CAS No.: 7601-89-0

12.2 Persistence and degradability

not necessary

12.3 Bioaccumulative potential

not necessary

12.4 Mobility in soil

not necessary

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no additional data available

SECTION 13: Disposal considerations

Do not collect in acidic waste. May form toxic gases.

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

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. (ethanol mixture)

14.3 Class: 3

14.4 Packing group: II

Road transport

Classification code: F1

Limited Quantity: 1 L

Tunnel restriction code: E

Excepted Quantity: E 2

Special instructions: 640C

Air transport

PAX: 353

max. weight PAX: 5 L

CAO: 364

max. weight CAO: 60 L

Maritime transport

EmS: F-E, S-E

Storage category: B

14.5 Environmental hazards

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

14.6 Special precautions for user

not necessary

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

German act governing protection from hazardous substances (Chemicals Act / Chemikaliengesetz- ChemG), revised on August 2013

German order governing protection from hazardous substances (Ordinance on Hazardous Substances / Gefahrstoffverordnung - GefStoffV), revised on November 2010, according to Directive 98/24/EC

TRGS 200, German engineering rules governing the classification and labelling of hazardous substances, preparations and products, updated October 2011

More information in the insert

Look for your country-specific regulations.

Safety Data Sheet

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

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

H226 Flammable liquid and vapor.
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. H412 Harmful to aquatic life with long lasting effects.

16.1.2 List of relevant P phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P261sh Avoid breathing dust/vapors.
P264W Wash with water thoroughly after handling.
P273 Avoid release to the environment.
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 ArbSchG)!
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

Bio-X Diagnostics S.A. 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.

Bio-X Diagnostics makes NO REPRESENTATIONS or WARRANTIES, either expressed or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly Bio-X Diagnostics S.A. will not be responsible for damages resulting from use of or reliance upon this information. See terms and conditions at the end of our price lists for additional information.

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
TRGS 900, German engineering rules governing limits in air at work, updated 03/2018
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
Directive 1999/92/EC Minimum requirements for improving the safety and health protection of workers at risk from potentially explosive atmospheres
KÜHN, BIRETT Merkblätter Gefährliche Arbeitsstoffe (Data Sheets of Hazardous Substances)