

Safety Data Sheet

according to Regulation (EC) No.1907/2006
released 2018/02/07



GENERAL SECTION

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Product name: ENZYME IMMUNOASSAY FOR THE QUANTITATIVE DETERMINATION OF BIOACTIVE SCLEROSTIN IN HUMAN SERUM, EDTA PLASMA OR CITRATE PLASMA
Product Number: CAT. NO. BI-20472, 12 X 8 TESTS
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: FOR RESEARCH USE ONLY
NOT FOR USE IN DIAGNOSTIC PROCEDURES

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG
A-1210 Wien, Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com
Prepared by: Biomedica Slovakia, 841 01 Bratislava, Drobného 27

1.4. Emergency telephone number

Phone: +43-1-4064343

1.5. Further information

All reagents sold by BIOMEDICA must be handled only by qualified laboratory personal. All preservative substances used in our products are there in too low concentrations to constitute any danger and standard laboratory precautions should suffice for effective protection.

Nonetheless, in the case of unusual exposure, the form(s), furnished in the appendix, provoke(s) all the necessary information.

1.6. Partition of section 2-16 of the data safety sheet in specific forms

The following are hazardous substances present in this product:

Hazardous substance	Substance part of the following ELISA kit component, [Identification name of vial]	Quantity/ concentration of (hazardous) substance	Material Safety data sheet [no.]	Page of this MSDS
Substrate (TMB solution)	TMB	0.1%	1	2
Stop Solution	STOP	2.95%	2	9
Conjugate (SOST bioactive POX-labelled antibody)	CONJ	0.915%	3	15
Assay buffer	ASYBUF	1.1 %	4	23
Standards, Control	STD, CTRL	100%	5	30
Wash buffer concentrate 20x	WASHBUF	18.16%	6	36

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SPECIFIC SECTION

Material safety data sheet no.1 SPECIFIC SECTION

Material safety data sheet no.1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: TMB substrate
component ID: TMB
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Although it is not classified as hazardous according to the European Regulation 1999/45/EC the product should be handled with the usual care for all chemicals, in order to avoid synergistic effects.

Because of the preservative it may be dangerous for water organisms.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram	none
Signal word	none
Supplemental hazard statements	none

2.3. Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2. Mixtures

Chemical characterization of product composition:

Aqueous solution of TMB, hydrogen peroxide, Tween 20 as detergent, citrate, EDTA, Kathon CG as preservative

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Dangerous components:

Component	Classification R-phrases	Percentage
3,3',5,5'-Tetramethylbenzidine		
EINECS: 259-364-6 CAS-NR: 54827-17-7	Xi H315, H319, H335	0.036%
Ethylene diamine tetraacetate disodium salt MW: C₁₀H₁₄O₈N₂Na₂.2H₂O		
EINECS: 205-358-3 CAS-NR: 6381-92-6	Xi, H332, H373	0.093%
5-Chlor-2-methyl-4-isothiazolin-3-one		
EINECS: 247-500-7 CAS-NR: 26172-55-4	T, N H302,314,317,331,335, 400	0.00009%
2-Methyl-4-isothiazolin-3-one		
EINECS: 220-239-6 CAS-NR: 2682-20-4	T, N H302,314,317,331,335, 400	0.00003%
Hydrogen peroxide		
EINECS: 231-765-0 CAS-NR: 7722-84-1	C, O H302, H318	0.002%

For the full text of the H-statements mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Contaminated clothing should be washed prior to next use. Consult a physician, show this safety data sheet to the doctor in attendance.

In case of skin contact

After contact with skin carefully wash with water.

In case of eye contact

After contact with the eyes carefully rinse the opened eye with running water for several minutes and consult a physician.

If swallowed

After swallowing, rinse mouth and drink water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

In case of fire toxic vapours can be released.

Wear breath protective mask and protective clothes if necessary during fire fighting.

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5.4. Further information

The product itself is not inflammable; extinguishing measures should therefore be prepared for an environmental fire.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Dilute with plenty of water. Ventilate and clean affected area very carefully after having completely disposed off the material.

6.4. Reference to other sections

No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

7.2. Conditions for safe storage, including any incompatibilities

At 2-8°C in closed HDPE or PP bottles. Protect from light.

7.3. Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

EINECS	name	limit value according MAK (TRGS 900)
259-364-6	3,3',5,5'-Tetramethylbenzidine	not listed
205-358-3	Ethylene diamine tetraacetate disodium salt	not listed
247-500-7	5-Chlor-2-methyl-4-isothiazolin-3-one	0.05 mg/m ³
220-239-6	2-Methyl-4-isothiazolin-3-one	0.05 mg/m ³
231-765-0	Hydrogen peroxide	1.4 mg/m ³

By using the product according to the requirements, no air pollution is to be expected.

8.2. Expose controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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8.3. Personal protective equipment

Respiratory protection: not required

Hand protection: protective gloves of nitril-rubber or natural latex

Eye protection: protective glasses. Tightly fitting safety goggles. Face-shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	liquid product, slightly foaming when shaken
b) Colour:	clear
c) Odour:	characteristic
d) pH:	3.6 – 3.8
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	100°C
g) Flash point:	not applicable
h) Evaporation rate:	no data available.
i) Flammability (solid, gas):	no data available.
j) Upper/lower flammability or explosive limits:	no data available.
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	1.003 g/ml
n) Water solubility:	complete soluble/miscible
o) Partition coefficient: n-octanol/water:	complete soluble/miscible in protic solvents
p) Auto-ignition temperature:	no data available.
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	no data available.
t) Oxidizing properties:	no data available.

Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Strong heat, light, especially sunlight will not cause a dangerous reaction, but destroys the quality as substrate solution.

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10.5. Incompatible materials

Heavy metal salts, peroxidases and catalases will not cause a dangerous reaction, but destroys the quality as substrate solution.

10.6. Hazardous decomposition products

The final decomposition product is the yellow Di-ammoniumion of Tetra-methylbenzidine, a slightly water soluble biodegradable substance not classified as hazardous.

Note: contains preservatives as stated under SPECIFIC SECTION material safety data sheet NO.1, point 3 *COMPOSITION/INFORMATION ON INGREDIENTS*.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Component	valuation	value	species
3,3',5,5'-tetramethylbenzidine	no information		
Ethylene diamine tetraacetate disodium salt	LD50 (oral)	2000 mg/kg	rat
5-chlor-2-methyl-4-isothiazolin-3-one	LD50 (oral)	3350 mg/kg	rat
2-methyl-4-isothiazolin-3-one	LD50 (oral)	550 mg/kg	rat
hydrogen peroxide	LD50 (oral)	1232 mg/kg	rat
	LD50 (dermal)	3000 mg/kg	rabbit

Further toxicological information:

Quantitative data concerning toxicity of the product do not exist.

12. ECOLOGICAL INFORMATION

Only relevant for the preservatives 5-chlor-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one

12.1. Toxicity

species	valuation	value
trout	LC50 (mg/l)	0.19
bass	LC50 (mg/l)	0.28
marine algae (<i>Skeletonema costatum</i>)	EC50 (mg/l)	0.003
algae (<i>Selenastrum capricornutum</i>)	EC50 (mg/l)	0.018
invertebrates (<i>Daphnia magna</i>)	EC50 (mg/l)	0.16

12.2. Persistence and degradability

substance	t 1/2 anerobic (h)
5-chlor-2-methyl-4-isothiazolin-3-one	4.8
2-methyl-4-isothiazolin-3-one	9.1

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

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12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

If used properly, no ecological problems are to be expected.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

May not be discarded together with the normal waste.

Chemicals or remaining residues have to be treated as special waste and should be discarded according to the appropriate legislation. Information can be collected from the responsible public authorities.

Contaminated packaging

Disposal according to the instructions of the public authorities. Contaminated packages have to be treated like the substance itself. Packaging, that is not contaminated, can be recycled or treated like normal house garbage.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)

1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC)
No.1907/2006.

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

Symbol: not applicable.

Designation: not applicable.

15.2. Chemical Safety assessment

Water endangering class 1 (self-classification): low potential of water endangering.

16. OTHER INFORMATION

Text of H-code(s) mentioned in Section 3

classification	Number	description
Xi		irritant
N		environmental hazard
T		toxic
C		corrosive
O		oxidizing
H	302	Harmful if swallowed.
	314	Causes severe skin burns and eye damage.
	317	May cause an allergic skin reaction
	318	Causes serious eye damage
	331	Toxic if inhaled.
	332	Harmful if inhaled
	373	May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled
	315	Causes skin irritation.
	319	Causes serious eye irritation.
	335	May cause respiratory irritation.
	400	Very toxic to aquatic life.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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SPECIFIC SECTION

Material safety data sheet no.2

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Sulfuric acid (H₂SO₄)
component ID: STOP
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: FOR RESEARCH USE ONLY
NOT FOR USE IN DIAGNOSTIC PROCEDURES

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not classified as hazardous according to Regulation (EC) No. 1272/2008 and according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none
Signal word none
Supplemental hazard statements none

2.3. Other hazards

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

See section 3.2

3.2. Mixtures

Component	Classification	Percentage
Sulfuric acid		
CAS-No. 7664-93-9 EC-Nr. 231-639-5 INDEX-Nr. 016-020-00-8	Skin Corr.1B;STOT SE3; H 315, H319	2.95%
Water		
CAS-No. 7732-18-5 EC-No. 231-791-2	-	97.05%

For the full text of the H-statements mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 min and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Rinse mouth with water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P330+P331 If swallowed: Rinse mouth out, do not induce vomiting.
- P 309 In case of exposure or if you feel unwell.
- P310 Call the POISONS INFORMATION CENTRE or a doctor immediately.
- P305+P351 IN CASE OF CONTACT WITH THE EYES: Rinse carefully with water for a few minutes. Remove any contact lenses if possible. Continue rinsing

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face-shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection

Lab coat protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	liquid
b) Odour:	no data available.
c) Odour Threshold:	no data available.
d) pH:	no data available.
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	no data available.
g) Flash point:	no data available.
h) Evaporation rate:	no data available.
i) Flammability (solid, gas):	no data available.
j) Upper/lower flammability or explosive limits:	no data available.
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	no data available.
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no data available.
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	no data available.
t) Oxidizing properties:	no data available.

9.2. Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

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No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sulfuric acid)

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Potential health effects

Inhalation

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed. Causes burns.

Skin

May be harmful if absorbed through skin. Causes skin burns.

Eyes

May be harmful in contact with eyes. Causes eye burns.

Additional information

No data available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

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Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)

1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC)
No.1907/2006.

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

No data available.

15.2. Chemical safety assessment

No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases mentioned in Section 3

Classification	Number	description
Skin Corr.	1B	Skin corrosion
STOT SE	3	Specific target organ toxicity - single exposure
C		Corrosive
H	315	Causes severe skin burns
	319	Causes severe eyes irritation

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state

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of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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SPECIFIC SECTION

Material safety data sheet no.3

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Conjugate
Component ID: CONJ
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Based on percentages of hazardous ingredients in this product, this product is not classified as "dangerous" under EU Directives (67/548/EEC and 1999/45/EC) or hazardous under US OSHA Hazard Communication Regulations (29 CFR 1910.1200).

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none
Signal word none
Supplemental hazard statements none

2.3. Other hazards

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

See section 3.2

3.2. Mixtures

Component	Classification	Percentage
Proprietary formulation; no hazardous components above 1% or carcinogens above 0.1%		
CAS-No. No data available. EINECS -No. No data available.	Not classified	100%
Tris(hydroxymethyl)-aminomethane MW: NH₂C(CH₂OH)₃		
CAS-No. 77-86-1	Xi,	0.01%

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EINECS-No. 201-064-4	H315, H319, H335	
Tris(hydroxymethyl)-aminomethane hydrochlorid MW: $\text{NH}_2\text{C}(\text{CH}_2\text{OH})_3 \cdot \text{HCl}$		
CAS-No. 1185-53-1 EINECS-No. 214-684-5	Xi, H315, H319, H335	0.1%
Albumine, from bovine serum		
CAS-No.9048-46-8 EC-No. 232-936-2	-	0.5%
Proclin 150		
CAS-No.55965-84-9 EC-No. 613-167-00-5	C, Xi, H314, H317, H335, H411	0.1%
Phenol		
CAS-No. 108-95-2	C, Xn, H301 + H311 + H331, H314, 341, 373,411	0.2%
Gentamycin sulfate		
CAS-No 1405-41-0 EC-No. 215-778-9	Xn, H317, H334	0.005%

For the full text of the H-statements mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim from the origin of exposure to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Contact a physician.

In case of skin contact

Avoid contact with skin. Remove contaminated clothes, wash immediately with plenty of water.

In case of eye contact

Avoid contact with eyes. Flush eyes immediately with plenty of water for 15 minutes.

If swallowed

After ingestion rinse mouth several times with plenty of water, give extensive water for drinking, contact a physician.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

In case of fire use water spray (fog), foam or dry powder. Use in accordance to the surroundings.

5.2. Special hazards arising from the substance or mixture

The substance may be combustible at high temperature. Combustion products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂ ...), halogenated compounds, hydrogen bromide gas.

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5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with the preparation. Don't inhale vapours or atomized spray. Assure adequate air ventilation

6.2. Environmental precautions

Use appropriate tools to put the spilled substances in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.3. Methods and materials for containment and cleaning up

Absorb with liquid absorbing material (sand, diatomine, universal binders). Forward to disposal. Clean affected area with plenty of water.

6.4. Reference to other sections

No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P273 Avoid release to the environment.

P280 Wear protective gloves and eye protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

7.2. Conditions for safe storage, including any incompatibilities

Store refrigerated 2-8°C.

7.3. Specific end uses

No data available.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): None

Exposure Limits:

OSHA PEL: none established.

ACGIH TLV: none established.

ENGINEERING CONTROLS: Not respirable as a liquid.

8.2. Expose controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye/face protection

Safety goggles or glasses with side shields.

Skin protection

Wear a lab coat. Change contaminated clothes immediately. After handling wash hands with soap and water.

Respiratory protection

Avoid inhaling vapour and spray fog. Breathing protection not necessary.

General hygiene controls

Practice good chemical hygiene when handling.

Avoid contact with eyes, skin and clothing.

Do not ingest material.

Safety shower and eyewash station available near location of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	clear, red liquid
b) Odour:	characteristic
c) Physical state:	liquid
d) pH:	7.1 ± 0.1
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	no data available.
g) Flash point:	no data available.
h) Evaporation rate:	no data available.
i) Flammability (solid, gas):	no data available.
j) Upper/lower flammability or explosive limits:	no data available.
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	soluble
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no data available.
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	no data available.
t) Oxidizing properties:	no data available.

9.2. Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Reactive with oxidizing agents.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Excess heat and incompatible materials.
The substance is sensitive to light

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Though complete toxicity information on CONJ is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Potential health effects

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Skin: May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May cause mucous membrane irritation.
Inhalation: May cause respiratory tract irritation.

Additional information

May affect behavior/central nervous system (tremor, convulsions, excitement).
Further dangerous properties cannot be ruled out. The preparation must be handled with the usual care for chemicals.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

The waste produced from utilizing the preparation and the unused preparation should be disposed of according to the prevailing regulations and guidelines of the agencies holding jurisdiction over the laboratory, and the regulations of each country. The disposal of liquid effluents should be carried out according to the existing local laws and to the existing local regulation governing water pollution.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

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14.5. Environmental hazards

No data available.

14.6. Reportable quantity (RQ)

No data available.

14.7. Emergency telephone number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE
COMPENSATION, AND LIABILITY ACT): not applicable.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION
ACT): not listed.

INTERNATIONAL REGULATIONS

There are no hazardous ingredients in an amount that requires identification and labeling according to European Community Directives.

EUROPEAN UNION'S REACH (REGISTRATION, EVALUATION, AND AUTHORIZATION OF CHEMICALS):

This product meets the definition of a preparation. The aggregate volume of each non-exempt substance in this product does not exceed the 1 metric ton per year threshold. Therefore, registration is not required.

This safety data sheet has been prepared to comply with the requirements of Annex II, European Community Regulation No. 1907/2006 (REACH) and ANSI Z400.1-2004 guidelines.

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

No data available.

15.2. Chemical Safety assessment

No data available.

16. OTHER INFORMATION

Text of H-code(s) mentioned in Section 3

classification	number	description
C		corrosive
Xn		harmful
Xi		irritant
H	315	Causes skin irritation.
	301 + 311 + 331	Toxic if swallowed, in contact with skin or if inhaled
	314	Causes severe skin burns and eye damage
	317	May cause an allergic skin reaction.
	319	Causes serious eye irritation
	334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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	335	May cause respiratory irritation.
	341	Suspected of causing genetic defects.
	373	May cause damage to organs through prolonged or repeated exposure.
	411	Toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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SPECIFIC SECTION

Material safety data sheet no.4

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Assay buffer
Component ID: ASYBUF
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: FOR RESEARCH USE ONLY
NOT FOR USE IN DIAGNOSTIC PROCEDURES

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none
Signal word none
Supplemental hazard statements none

2.3. Other hazards

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2. Mixtures

Component	Classification	Concentration/percentage
Proprietary formulation; no hazardous components above 1% or carcinogens above 0.1%		
CAS-No. None EINECS -No. none	Not classified	100%

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Probumin from bovine serum		
CAS-No.9048-46-8 EC-No. 232-936-2	-	1 %
Polyoxyethylene (20) sorbitan monolaurate MW: C ₅₈ H ₁₁₄ O ₂₆		
CAS-No.9005-64-5 EC-No.500-018-3	-	0.1%
Water		
CAS-No.7732-18-5 EC-No. 231-791-2	-	98.9%

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person to fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off immediately with soap and plenty of water.

In case of eye contact

Rinse thoroughly with plenty of water, also under the eyelids.

If swallowed

Never give anything by mouth to an unconscious person. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

No restriction. Use appropriate agent for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Do not let product enter drains.

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6.3. Reference to other sections

No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

7.2. Conditions for safe storage, including any incompatibilities

Keep in properly labeled containers.; Store at 2-8°C.

VbF-Class: not applicable.

7.3. Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal protective equipment

Eye/face protection

Tightly fitting safety goggles.

Skin protection

Handle with chemical-resistance gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- | | |
|---|--------------------|
| a) Appearance form: | liquid |
| b) Colour: | clear - yellowish |
| c) Odour: | characteristic |
| d) pH: | 7.4 |
| e) Melting point/freezing point: | no data available. |
| f) Initial boiling point and boiling range: | no data available. |
| g) Flash point: | no data available. |
| h) Evapour ation rate: | no data available. |

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i) Flammability (solid, gas):	no applicable
j) Upper/lower flammability or explosive limits:	no applicable
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	complete
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no applicable
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	not explosive
t) Oxidizing properties:	no data available.

9.2. Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerization: will not occur.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Though complete toxicity information on ASYBUF is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA. The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Acute toxicity

Polyoxyethylene (20) sorbitan monolaurate:

Acute oral toxicity (LD50): 40.55 mg/kg [rat],

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

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Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Though complete toxicity information on ASYBUF is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Polyoxyethylene (20) sorbitan monolaurate:

Toxicity (LC50): 350 mg/l for 24h [fish],

12.2. Persistence and degradability

No data available.

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Prevent product from entering drains. Dispose of in accordance with local regulations.

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14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION, AND LIABILITY ACT): not applicable.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): not listed.

INTERNATIONAL REGULATIONS

There are no hazardous ingredients in an amount that requires identification and labeling according to European Community Directives.

EUROPEAN UNION'S REACH (REGISTRATION, EVALUATION, AND AUTHORIZATION OF CHEMICALS):

This product meets the definition of a preparation. The aggregate volume of each non-exempt substance in this product does not exceed the 1 metric ton per year threshold. Therefore, registration is not required.

This safety data sheet has been prepared to comply with the requirements of Annex II, European Community Regulation No. 1907/2006 (REACH) and ANSI Z400.1-2004 guidelines.

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

No data available.

15.2. Chemical safety assessment

No data available.

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16. OTHER INFORMATION

Text of H-code(s) mentioned in Section 3

None.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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Material safety data sheet no.5

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Standard
component ID: STD
Kit component name: Control
component ID: CTRL

Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3. Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2.

Component	Classification	Percentage
Human serum		
-	-	100%

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

In case of skin contact

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

In case of eye contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

If swallowed

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Suitable: Use extinguishing media appropriate to surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

No data available

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4. Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

6.2. Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Wash spill site with 10% bleach and ventilate area after material pickup is complete.

6.3. Reference to other sections

No data available

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

7.2. Conditions for safe storage, including any incompatibilities

Conditions of storage: Keep tightly closed. Store at < -25°C.

7.3. Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

ENGINEERING CONTROLS:

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES:

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand protection: Compatible chemical-resistant gloves.

Eye protection: Chemical safety goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance Form:	lyophilized
b) Colour:	clear - turbid, yellowish
c) Odour:	no data available
d) pH:	no data available
e) Melting point/freezing point:	no data available
f) Initial boiling point and boiling range:	no data available
g) Flash point:	no data available
h) Evaporation rate:	no data available
i) Flammability (solid, gas):	no data available
j) Upper/lower flammability or explosive limits:	no data available
k) Vapour pressure:	no data available
l) Vapour density:	no data available
m) Relative density:	no data available
n) Water solubility:	no data available

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o) Partition coefficient: n-octanol/water:	no data available
p) Auto-ignition temperature:	no data available
q) Decomposition temperature:	no data available
r) Viscosity:	no data available
s) Explosive properties:	no data available
t) Oxidizing properties:	no data available

9.2. Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerization: will not occur.

10.2. Chemical stability

Stable: stable

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Strong oxidizing agents

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

Hazardous decomposition products: Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Skin corrosion/irritation

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Serious eye damage/eye irritation

May cause eye irritation

Respiratory or skin sensitization

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional information

May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Disposal should be made in accordance with existing disposal practices employed for infectious waste at your institution. Observe all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport

14.4. Packaging group

Non-regulated, non-hazardous for transport

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14.5. Environmental hazards

Not available

14.6. Reportable Quantity (RQ)

Not known

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. Special precautions for user

Not known

15. REGULATORY INFORMATION

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: B Biohazard.

Not hazardous according to Directive 67/548/EEC.

Caution: Substance not yet fully tested (EU).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

Self-Classification

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

No data available.

15.2. Chemical safety assessment

No data available.

16. OTHER INFORMATION

Text of H-code(s) mentioned in Section 3

None.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

SPECIFIC SECTION

Material safety data sheet no.6

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Wash buffer concentrate 20x
component ID: WASHBUF
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3. Other hazards

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2. Mixtures

Aqueous solution of $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$, KH_2PO_4 , KCl , NaCl with Triton-X and Proclin, Proclin 300 as preservative.

Component	Classification	Percentage
Sodium Chloride MW: NaCl		
CAS-No.7647-14-5 EC-No. 231-598-3	-	16%

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4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol MW: (C ₂ H ₄ O) _n C ₁₄ H ₂₂ O		
CAS-No.9002-93-1 EC-No.	N,Xn H302, H319, H411	2%
Proclin300		
CAS-No.55965-84-9 EC-No. 613-167-00-5	H302, H317, H314, H410	0.08%

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

In case of skin contact

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

In case of eye contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

If swallowed

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Vomiting, diarrhoea, dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate to surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

Hydrogen chloride gas, sodium oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid contact with skin and eyes.

6.2. Environmental precautions

Use appropriate tools to put the spilled substances in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.3. Methods and materials for containment and cleaning up

Absorb with liquid absorbing material (sand, diatomine, universal binders). Forward to disposal. Clean affected area with plenty of water.

6.4. Reference to other sections

No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

7.2. Conditions for safe storage, including any incompatibilities

Store refrigerated 2-8°C.

7.3. Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

ENGINEERING CONTROLS:

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES:

Wash thoroughly after handling.

8.3. Personal protective equipment:

Respiratory protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk

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assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand protection: Compatible chemical-resistant gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	liquid
b) Colour:	clear - yellowish
c) Odour:	No data available.
d) pH:	7.4 ± 0.1
e) Melting point/freezing point:	No data available.
f) Initial boiling point and boiling range:	No data available.
g) Flash point:	No data available.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	No data available.
j) Upper/lower flammability or explosive limits:	No data available.
k) Vapour pressure:	No data available.
l) Vapour density:	No data available.
m) Relative density:	No data available.
n) Water solubility:	No data available.
o) Partition coefficient: n-octanol/water:	No data available.
p) Auto-ignition temperature:	No data available.
q) Decomposition temperature:	No data available.
r) Viscosity:	No data available.
s) Explosive properties:	No data available.
t) Oxidizing properties:	No data available.

9.2. Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

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10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Sodium Chloride:

Acute Oral Toxicity (LD50): 3.000 mg/kg [rat]

4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol:

Acute Oral Toxicity (LD50): 707 mg/kg [rat, female]

Acute Oral Toxicity (LD50): 500 mg/kg [rat, male]

Skin corrosion/irritation

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Serious eye damage/eye irritation

May cause eye irritation

Respiratory or skin sensitization

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Sodium Chloride:

Acute Toxicity (LC50): 1.294,6 mg/l – 96h [Lepomis macrochirus]

Acute Toxicity (LC50): 1.661 mg/l – 48h [Daphnia magna]

4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol:

Acute Toxicity (LC50): 8.9 mg/l – 96h [Pimephales promelas]

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Acute Toxicity (LC50): 26 mg/l – 48h [Daphnia magna]

12.2. Persistence and degradability

No data available.

12.3. Bio-accumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Disposal should be made in accordance with existing disposal practices employed for infectious waste at your institution. Observe all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport

14.4. Packaging group

Non-regulated, non-hazardous for transport

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)

1-703-527-3887 (International shipments)

Safety Data Sheet

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14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

Not hazardous according to Directive 67/548/EEC.

Caution: Substance not yet fully tested (EU).

COUNTRY SPECIFIC INFORMATION

No data available.

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

No data available.

15.2. Chemical safety assessment

No data available.

16. OTHER INFORMATION

Text of H-code(s) mentioned in Section 3

classification	number	description
Xn		Harmful
N		Dangerous for the environment
H	302	Harmful if swallowed.
	314	Causes severe skin burns and eye damage.
	317	May cause an allergic skin reaction.
	319	Causes serious eye irritation.
	410	Very toxic to aquatic life with long lasting effects.
	411	Toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.