

SAFETY DATA SHEET

Protein Extraction Buffer – DTT Component

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

1.1 Product identifier

Protein Extraction Buffer – DTT component

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

For research use only - Chemical analysis

Reduction component for use in Denator kit.

1.3 Details of the supplier of the safety data sheet

Denator AB

Arvid Wallgrens backe 20

SE-413 46 Göteborg

SWEDEN

Phone +46 (0)31 412 890

inform@denator.com

www.denator.com

1.4 Emergency telephone number

+46 (0)31 412 890 (office hours)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

EU Directive 1999/45/EG

Xn, R22

Xi, R36/37/38

EU Regulation 1272/2008

Acute Tox. 4 H302

Skin Irrit. 2 H315

Eye Irrit. 2 H319

STOT SE 3 H335

See section 16 for explanations to hazard codes, risk phrases and hazard statements

2.2 Label elements

EU Regulation 1272/2008

Pictogram



Signal word

Warning

Hazard Statements

H302

Harmful if swallowed.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation

Precautionary statements

P261 Avoid breathing dust
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

No known.

After dissolution – the product is **classified “not hazardous”**.

SECTION 3: Composition/information on ingredients

3.1 Compounds

CAS no / EG no	Compound	Classification ¹	%
		67/548/EEG 1272/2008	
3483-12-3 / 222-468-7	(R*,R*)-1,4-dimercaptobutane-2,3-diol	Xn, R22; Xi, R36/37/38 Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	100

1) See section 16 for explanations to hazard codes, risk phrases and hazard statements

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation

Fresh air.

Give artificial respiration if needed. Contact a physician.

Skin contact

Wash the skin with soap and water. Consult a physician if symptoms persist.

Eye contact

Rinse the eyes with water for at least 15 minutes. Keep the eyelids wide apart. Contact an eye doctor.

Ingestion

Rinse out mouth with water. Contact a physician.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation

Irritating to respiratory system.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes.

Ingestion

Nausea, headache, vomiting, central nervous system depression.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

The product is not flammable.

Use suitable extinguishing media dependent on what is on fire in the vicinity.

5.2 Special hazards arising from the substance or mixture
Toxic fumes of carbon- and sulphur oxides are formed during combustion.

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting, if necessary.

SECTION 6: Accidental release measure

6.1 Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes. Avoid breathing dust.
Use suitable gloves and safety goggles if needed.

6.2 Environmental precautions
Do not let the product enter the sewer.

6.3 Methods and material for containment and cleaning up
Pick up, put in a container and hand over to waste management. Avoid raising dust.
Clean the area with a wet cloth.

6.4 Reference to other sections
See section 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Wash hands after use.
Do not eat or drink when using the product.
Avoid contact with skin and eyes.
Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities
Store at +4 to +8 °C.
Keep container closed.
After dilution - store in freezer at -18 °C

7.3 Specific end use(s)
For research use only - Chemical analysis.
The content of the ampoule is dissolved before use. See instructions from the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
National limit values in Sweden (AFS 2005:17)
No limit values.

8.2 Exposure controls
Adequate ventilation.

Personal protection
Use safety goggles if there is a risk of eye exposure.
Access to eye wash.
Use protective gloves.

Environmental exposure controls
Avoid release into sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	powder
Odour	unpleasant
Colour	white
pH (20°C)	not applicable
diluted product	3.1
Boiling point	no information
Flash point	113 °C
Vapour pressure (20°C)	no information

9.2 Other information

Water solubility (20°C)	15.4 g/l
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SECTION 10: Stability and reactivity

10.1 Reactivity

Not liable to react during normal conditions.

10.2 Chemical stability

Stable during normal conditions.

10.3 Possibility of hazardous reactions

No known.

10.4 Conditions to avoid

No known.

10.5 Incompatible materials

Bases, oxidizing agents, reducing agents, alkali metals.

10.6 Hazardous decomposition products

No known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Compounds

(R*,R*)-1,4-dimercaptobutane-2,3-diol

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin contact	May be harmful if absorbed through skin. Causes skin irritation
Eyes contact	Causes serious eye irritation
Ingestion	Harmful if swallowed.
LD ₅₀ Oral Rat	400 mg/kg bw

Mixtures

After dissolution – **the product is classified “not hazardous”.**

Likely routes of exposure – skin and eyes.

SECTION 12: Ecological information

12.1 Toxicity

(R*,R*)-1,4-dimercaptobutane-2,3-diol

LC₅₀ - Daphnia 48 h 27 mg/l. Species D. magna

12.2 Persistence and degradability

No information.

12.3 Bioaccumulative potential

No information.

12.4 Mobility in soil

No information.

12.5 Results of PBT and vPvB assessment

No information.

12.6 Other adverse effects

No known.

SECTION 13: Disposal considerations

Discarded product is classified as hazardous waste according to EU Directive 2008/98/EC.

H 4 **'Irritant': non-corrosive substances and preparations** which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation.

H 5 **'Harmful': substances and preparations which, if they are inhaled or ingested or** if they penetrate the skin, may involve limited health risks.

13.1 Waste treatment methods

Contact the local waste management before discarding the product.

See additional regulations in EU Directive 2008/98/EC.

SECTION 14: Transport information

The product is not classified Dangerous goods according to ADR.

14.1 UN number

Not relevant.

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

SECTION 15: Regulatory information

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

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

AFS 2005:17 - Hygieniska gränsvärden och åtgärder mot luftföroreningar – *Occupational limit values in Sweden*.

DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

ADR – European Agreement Concerning the International Carriage of Dangerous goods by Road.

15.2 Chemical safety assessment

No Chemical Safety Report is available for the product.

SECTION 16: Other information

References

Data from the manufacturer

Explanations to hazard codes, risk phrases and hazard statements

Xn	Harmful
R22	Harmful if swallowed
Xi	Irritating
R36/37/38	Irritating to eyes, respiratory system and skin
Acute Tox. 4	Acute toxicity, hazard category 4
H302	Harmful if swallowed
Skin Irrit. 2	Skin corrosion/irritation, hazard category 2
H315	Causes skin irritation
Eye Irrit. 2	Serious eye damage/eye irritation, hazard category 2
H319	Causes serious eye irritation
STOT SE 3	Specific target organ toxicity — single exposure, hazard category 3
H335	May cause respiratory irritation

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