

# SAFETY DATA SHEET

Protein Extraction Buffer – Dry Component

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

### 1.1 Product identifier

Protein Extraction Buffer – Dry Component

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

For research use only - Chemical analysis

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](mailto:inform@denator.com)

[www.denator.com](http://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, R40, R63

N, R51/53

*EU Regulation 1272/2008*

Carc. 2 H351

Repr. 2 H361D

Acute Tox. 4 H302

Aquatic Chronic 2 H411

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

### 2.2 Label elements

*EU Directive 1999/45/EG*

|     |   |
|-----|---|
| Xn  | Harmful                                   |
| R22 | Harmful if swallowed                      |
| R40 | Limited evidence of a carcinogenic effect |
| R63 | Possible risk of harm to the unborn child |

|        |  |
|--------|--|
| N      | Dangerous for the environment  |
| R51/53 | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

|        |  |
|--------|--|
| S36/37 | Wear suitable protective clothing and gloves                                       |
| S61    | Avoid release to the environment. Refer to special instructions/Safety data Sheets |

### 2.3 Other hazards

No known.

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



**Harmful**



**Dangerous for the environment**

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

| CAS no / EG no      | Compound | Classification <sup>1</sup><br>67/548/EEG<br>1272/2008  | %     |
|---------------------|----------|---|-------|
| 62-56-6 / 200-543-5 | Thiourea | Xn, R22, R40, R63<br>N, R51/53<br>Carc. 2, H351; Repr. 2, H361D; Acute<br>Tox. 4, H302; Aquatic Chronic 2, H411 | 25-35 |

Other components

Urea

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.

#### *Eye contact*

Rinse the eyes with water for at least 5 minutes.

#### *Ingestion*

Rinse out mouth with water. Contact a physician.

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

#### *Skin contact*

May cause a hypersensitivity reaction in the skin when it is exposed to sunlight (photosensitisation).

#### *Ingestion*

Long-term exposure can cause effects on the thyroid and bone marrow.

### 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-, nitrogen- 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 breathing dust.

Avoid contact with skin and eyes.

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

Avoid raising dust.

Wash hands after use.

Avoid contact with skin and eyes.

Do not eat or drink when using the product.

Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

Store at room temperature.

Keep container closed.

### 7.3 Specific end use(s)

For research use only - Chemical analysis.

The product is intended to be mixed with a diluent 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 protective gloves.

Use safety goggles if there is a risk of eye exposure.

Access to eye wash.

#### *Environmental exposure controls*

Avoid release into sewer.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance                      crystalline powder

Odour none

Colour white

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|                        |                |
|------------------------|----------------|
| pH (20°C)              | not applicable |
| diluted product        | 8              |
| Boiling point          | no information |
| Flash point            | no information |
| Vapour pressure (20°C) | no information |

#### 9.2 Other information

Soluble in water.

### 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

Heat.

#### 10.5 Incompatible materials

Strong bases, acids and oxidizing agents.

#### 10.6 Hazardous decomposition products

No known.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### *Compounds*

Thiourea 25-35%

Limited evidence of carcinogenicity in animal studies

Suspected human reproductive toxicant

##### Skin contact

May cause allergic reaction.

After skin contact, this substance may cause a hypersensitivity reaction in the skin when it is exposed to sunlight (photosensitisation).

LD<sub>50</sub> Dermal Rabbit > 2800 mg/kg bw

##### Ingestion

Harmful if swallowed.

LD<sub>50</sub> Oral Rat 1750 mg/kg bw

##### *Mixtures*

The product has not been tested.

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

Likely routes of exposure – skin and eyes.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Thiourea 25-35%

LC<sub>50</sub> Fish 96h: >100 mg/l Species: Pimephales promelas

EC<sub>50</sub> Daphnia 48h: 1,8 mg/l Species: D. magna

IC<sub>50</sub> Algae 72h: 3,8 mg/l Species: Scenedesmus subspicatus

#### 12.2 Persistence and degradability

Thiourea 25-35%

3% is degraded in 28 days (OECD 301E) – not ready biodegradable

#### 12.3 Bioaccumulative potential

Thiourea 25-35%

Log P<sub>ow</sub>: -1,08

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

H 14 **'Ecotoxic': waste which presents or may present immediate or delayed risks for one or more sectors of the environment.**

#### 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 classified Dangerous goods according to ADR.

#### 14.1 UN number

3077

#### 14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thiourea)

#### 14.3 Transport hazard class(es)

9

#### 14.4 Packing group

III

#### 14.5 Environmental hazards

Yes

#### 14.6 Special precautions for user

No information.

#### 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

Chemical Substances – database on the Internet [http://kemi.prevent.se/default\\_eng.asp](http://kemi.prevent.se/default_eng.asp)

### Explanations to hazard codes, risk phrases and hazard statements

|                   |  |
|-------------------|--|
| Xn                | Harmful  |
| R22               | Harmful if swallowed   |
| R40               | Limited evidence of a carcinogenic effect  |
| R63               | Possible risk of harm to the unborn child  |
| N                 | Dangerous for the environment  |
| R51/53            | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| Carc. 2           | Carcinogenicity, hazard category 2   |
| H351              | Suspected of causing cancer  |
| Repr. 2           | Reproductive toxicity, hazard category 2   |
| H361D             | Suspected of damaging the unborn child   |
| Acute Tox. 4      | Acute toxicity, hazard category 4  |
| H302              | Harmful if swallowed   |
| Aquatic Chronic 2 | Hazardous to the aquatic environment, hazard category 2                                    |
| H411              | Toxic to aquatic life with long lasting effects  |

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