

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

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

#### 1.1 Product Identifier

**Article number**  
TN 1225

**Trade name**  
Selenite Broth

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

**Intended use:**  
Used for the selective enrichment of salmonellae from faeces, foodstuffs and other materials.

**Uses advised against:** -

#### 1.3 Details of the supplier of the Safety data sheet

**Name of supplier**  
sifin diagnostics gmbh  
Berliner Allee 317-321  
13088 Berlin, Germany

**Contact for technical information**  
Telefon: +49 (0)30 927030-0 (Head of Department Culture Media)  
Telefax: +49 (0)30 927030-30  
E-Mail: [info@sifin.de](mailto:info@sifin.de)

**E-Mail, competent person**  
[msds@conceptec.de](mailto:msds@conceptec.de)

#### 1.4 Emergency telephone number

Phone: +49 (0)30-927030-0, Safety Officer for Medical Devices  
Mo. – Th. 7.30 a.m. - 4.15 p.m., Fr. 7.30 a.m. - 3.00 p.m.

### SECTION 2: Hazards Identification

#### 2.1 Classification of the mixture

##### Classification according to Regulation (EC) 1272/2008 (CLP)



Acute Toxicity, oral, Category 2, H300



Akute Toxicity, inhalativ, Category 3, H331

Skin sensitisation, Category 1, H317

Hazardous to the aquatic environment, chronic, Kategorie 3, H412

##### Classification according to Directive 1999/45/EG (DPD)



T+, Very toxic, R28



Xn, Harmful, R20

Xn, Harmful, R43

R52/53

#### 2.2 Label elements

##### Labelling according to Regulation (EC) 1272/2008 (CLP)

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Hazard elements for labelling, contains	Sodium selenite
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Hazard pictogramme(s)	
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Signal word	Danger
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# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

<b>Hazard statements (H-statement)</b>	H300: Fatal if swallowed. H331: Toxic if inhaled. H317: May cause an allergic skin reaction. H412: Harmful to aquatic life with long lasting effects.
<b>Precautionary Statements (P-statement)</b>	P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with soap and plenty of water. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P405: Store locked up. P501: Dispose of contents/container according to local / regional / national regulations.
<b>Additional Labelling Elements</b>	Contact with acids liberates very toxic gas.
<b>Labelling according to Directive 1999/45/EG (DPD)</b>	
<b>Hazard elements for labelling, contains</b>	Sodium selenite
<b>Hazard symbols</b>	
<b>Risk phrases (R-phrases)</b>	R28: Very toxic if swallowed. R20: Harmful by inhalation. R43: May cause sensitisation by skin contact. R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Safety phrases (S-phrases)</b>	S28: After contact with skin, wash immediately with plenty of water and soap. S29: Do not empty into drains. S36/37: Wear suitable protective clothing and gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S61 Avoid release to the environment. Refer to special instructions / Safety data sheets.
<b>Additional Labelling elements</b>	Contact with acids liberates very toxic gas.

### 2.3 Other hazards

None known. Minimum standards for protection measures (TRGS 500) as common in the chemical industry should be followed.

## SECTION 3: Composition/Information on Ingredients

### 3.2 Mixtures

#### Description

Mixture of the following hazardous substances with non-hazardous additives

#### Hazardous ingredients

Substance name	CAS-No.	EC-No.	REACH-No.
Sodium selenite	10102-18-8	233-267-9	-
Conc. (w/w %)	Classification acc. to DSD	Classification acc. to CLP	Note
≥ 10 – ≤ 20 %			[1]

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

T+, R28	Acute Tox. 2, H300
T, R23	Acute Tox. 3, H 331
Xn, R43	Skin Sens. 1, H317
N, R51-53	Aqua Chron. 2, H411

[1] = Hazardous or environmentally harmful substance; [2] = substance with a Community workplace exposure limit; [3] = PBT substance; [4] = vPvB substance; [5] = SVHC-candidate (substance of very high concern).  
For the full text of the R-phrases / H-Statements mentioned in this section, see section 16.

### SECTION 4: First-Aid-Measures

#### 4.1 Description of First-Aid-Measures

General Advice: Immediately remove any clothing soiled by the product.

Inhalation: Fresh air. If breathing stops: immediately apply artificial breathing, if necessary oxygen. Call a physician immediately.

Skin contact: Wash off with water and soap. Call a physician immediately.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician immediately.

Ingestion: Rinse out mouth. Give water to drink (two glasses at most). Seek medical advice immediately.

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

No information available.

#### 4.3 Indications of any immediate medical attention and special treatment

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media: Water spray jet, carbon dioxide (CO<sub>2</sub>), foam, extinguishing powder.

Unsuitable extinguishing media: Water full jet

#### 5.2 Special Hazards arising from the substance or mixture

Hazardous combustion products: selenium dioxide, sodium oxides

#### 5.3 Advice for fire fighters

Use respiratory protection independent of recirculated air. Use personal protective equipment, if necessary (see Section 8). Suppress gases/vapours/mist with water spray jet.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures:

Do not breathe dusts/aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area. Wear appropriate protective equipment (see Section 8).

#### 6.2 Environmental precautions

Do not empty into drains.

#### 6.3 Methods and material for containment and cleaning up:

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see Section 7.2 and 10.5). Take up dry. Dispose of properly. Clean up affected area. Avoid formation of dust.

#### 6.4 Reference to other sections

See Section 7 for Handling and Storage, Section 8 for appropriate personal protective equipment and Section 13 for disposal considerations.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid generation of dusts/aerosols. In case of formation of dusts/aerosols: ensure

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

adequate ventilation.

Precautions against fire and explosion: No special measures necessary.

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

#### Technical measures and storing conditions

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: light-protected, at 10...25 °C. Keep locked up or in an area accessible only to qualified or authorized persons.

#### Packaging materials

Keep only in the original container.

Conditions for storage rooms and vessels:

No special measures necessary.

#### Hints for joint storage

Store separate from products of the following storage classes: 1, 2A, 3, 4.1A-B, 4.2, 4.3, 5.1C, 5.2, 6.2, 7.

Joint storage with products of storage classes 5.1B, 10-13 allowed, if specific conditions are kept (for further information: see Section 7.2 TRGS 510).

Storage class: 6.1B

### 7.3 Specific end use(s)

None known.

## SECTION 8: Exposure controls / Personal protective equipment

### 8.1 Control parameters

#### Exposure limits

Substance	CAS-No.	Value	Limit value	Source
Selenium and compounds, except hydrogen selenide	7782-49-2	Limit value (long term)	0,2 mg/m <sup>3</sup>	USA - NIOSH (US)
Selenium and compounds, except hydrogen selenide	7782-49-2	Limit value (long term)	0,2 mg/m <sup>3</sup>	USA - OSHA (US)
Selenium and compounds, except hydrogen selenide	7782-49-2	Limit value (long term)	0,1 mg/m <sup>3</sup>	EH40 WEL (UK)

Control- and monitoring procedures: see for example "NIOSH Manual of Analytical Methods", National Institute for Occupational Safety and Health.

#### DNEL- / DMEL-Value

Substance -

EC-No. -

CAS-No. -

Exposure Route	Species	Time of exposure / Effect	Value	Note
-	-	-	-	-

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

### PNEC-Value

<b>Substance</b>	-
<b>EC-No.</b>	-
<b>CAS-No.</b>	-

Environmental compartment	Species / Time of exposure / Effect	Value
-	-	-

### 8.2 Exposure controls

Appropriate engineering controls: Technical measures and appropriate working procedures should be given priority over the use of personal protective equipment:

Individual protection measures, such as personal protective equipment: Do not breathe dusts. Avoid skin contact. Do not breathe gas/mist/vapours. Avoid skin and eye contact.

<b>Hygienic measures</b>	Keep away from food and feeding stuff. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Separate storage of protective clothes.	
<b>Skin protection</b>	Protective clothes	
<b>Hand protection</b>	Nitrile rubber (reference substance: potassium tellurite)	
	Full contact:	Splash contact:
<b>Glove material</b>	Nitrile rubber	Nitrile rubber
<b>Glove thickness (mm)</b>	≥ 0.11	≥ 0.11
<b>Break through time (min)</b>	≥ 480	≥ 480
	The glove material has to be impermeable and resistant to the product. Due to missing tests no recommendation to the glove material can be given for the product. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.	
<b>Respiratory protection</b>	Respiratory protection in case of gas/mist/vapour -formation. Filtering device: Filter Type P3.	
<b>Eye/ face protection</b>	Goggles.	
<b>Thermal hazards</b>	None known.	
<b>Others</b>	None known.	
<b>Environmental Exposure controls</b>	-	Do not empty into drains.

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance	Solid
Form	Powder
Particle size	Not applicable
Colour	Beige.
Odour	Not applicable
Odour threshold	Not applicable
pH	Final pH at 25 °C: 7.0 ± 0.2
Melting point / freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Lower flammability or explosive Limits	No data available
Upper flammability or explosive Limits	No data available
Minimum ignition energy	No data available
Vapour pressure	Not applicable
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient; n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Thermal decomposition	No data available
Viscosity	No data available
Explosive properties	The product itself is not explosive.
Oxidising properties	The product itself is not oxidizing.

#### 9.2 Other Information

Density	No data available
Bulk density	No data available
Further information	Not applicable

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Dangerous reactions are not expected handling the product according to the intended use.

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

### 10.2 Chemical Stability

The product is chemically stable under standards ambient conditions (room temperature).

### 10.3 Possibility of hazardous reactions

See 10.1.

### 10.4 Conditions to avoid

No data available.

### 10.5 Incompatible materials

No data available.

### 10.6 Hazardous decomposition products

Hazardous combustion products: selenium dioxide, sodium oxide.

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

#### Acute Toxicity

Exposition	LD50/LC50-Value	Species/test system	Source
Oral	40,7 mg/kg (ATE)	Calculation method	

#### Skin irritation

No data available.

#### Eye irritation

No data available.

Sensitisation: No data available.

Repeated dose toxicity: No data available.

Mutagenicity: No data available.

Carcinogenicity: No data available.

Toxic for reproduction: No data available.

STOT – single exposure: No data available.

STOT – repeated exposure: No data available.

### 11.2 Further Information:

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

No data available.

Further toxicological information: Danger of cumulative effects

No data available.

#### Components: Sodium selenite

#### Acute Toxicity

Exposition	LD50/LC50-Value	Species/test system	Source
Oral	7 mg/kg (ATE)	Rat	GESTIS

#### Skin irritation

May cause irritations

# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

### Eye irritation

May cause irritations.

Sensation: May cause an allergic skin reaction.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity	Species/test system	Value
-	-	-

### 12.2 Persistence and degradability Biodegradation

Method	Elimination rate	Classification	Source
-	-	-	-

Biodegradation/Further Information: No data available.  
Further Information: No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of der PBT & vPvB assessment:

Product does not contain substances which meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 Other adverse effects

Biological effects: No data available.

Further information on ecology: Discharge in the environment must be avoided.

Toxicity	Species/test system	Value
Toxicity to fish		
LC50	96 h (GESTIS)	11.3 mg/l
Toxicity to Daphnia and other aquatic invertebrates		
LC50	Daphnia magna (Great Water flea), 48 h (ECETOX)	0.55 mg/l

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product: Recommendation: Waste can be disposed of in appropriate and approved facilities in compliance with applicable technical regulations following consultation with approved waste disposal management companies and authorities in charge.

Uncleaned Packaging: Recommendation: Completely emptied packages can be recycled. Packing which cannot be properly cleaned must be disposed of. Observe local/state/federal regulations.

Cleaned Packaging: Non-contaminated packages must be recycled or disposed of.

Waste codes / waste designations according to EWC / AVV: The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.



# Material Safety Data Sheet

## Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

### SECTION 14: Transport information

	ADR	RID	ADNR	IMDG	IATA
14.1 UN-Number	UN3283				
14.2 Proper shipping name	Selenium compound, solid, n.o.s (cont. Sodium selenite)				
14.3 Hazard class	6.1				
14.4 Packing group	II				
Tunnel code	C/E				
EmS				F-A, S-A	
14.5 Environmental Hazards:	Marine pollutant				
14.6 Special precautions for user:	-				
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IPBC code:	-				

### SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
National and local regulations must be observed. For information on labelling please refer to section 2 of this document.  
EU legislations: Subject to Directive 96/82/EG: not applicable.  
National Regulations: -  
Restrictions to occupation: Observe employment restrictions for pregnant and nursing mothers according to the 'mother protection guideline' (92/85/EEC). Observe restrictions to employment for juveniles according to the 'protection of young people at work directive' (94/33/EC).

#### TA Air

CAS-No.	Substance	Number	Class
-	-	-	-

Water hazard class: 2 (classification according to Annex 4 VwVwS (Deutschland)).

- 15.2 Chemical safety assessment  
For this product a chemical assessment was not carried out.

### SECTION 16: Other Information

Further Informations: None.  
Full text of R-phrases referred to under Sections 2 and 3

R-phrases	Text
20	Harmful by inhalation.
23	Very toxic by inhalation.
28	Very toxic if swallowed.
43	May cause sensitisation by skin contact.
51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under Sections 2 and 3

## Material Safety Data Sheet Selenite Broth



According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-06-26, Replaces version: 2007-01-05

H-statement	Text
300	Fatal if swallowed.
317	May cause an allergic skin reaction.
331	Toxic by inhalation.
411	Toxic to aquatic life with long lasting effects.
412	Harmful to aquatic life with long lasting effects.

**Further Information:** The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

**Changes:** The present MSDS is a completely revised MSDS fulfilling the requirements of Annex II of Regulation (EC) 1907/2006 and Annex II of Regulation (EC) 453/2010.