

# Material Safety Data Sheet

## ½ Fraser Broth Complete

According to Regulation (EC) No. 1907/2006  
Version 2.0, Issue Date: 2014-04-17, Replaces version: 2004-09-01



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

#### 1.1 Product Identifier

**Article number**  
TN 1034, TN 1037

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

**Intended use:**

Used for the selective enrichment of *Listeria spp.* from food (according to § 64 German Food and Feed Code) and from environmental material.

**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)**

 Skin corrosion/irritation, Category 2, H315

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

This mixture is classified as not hazardous according to Directive 1999/45/EC.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**

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**Hazard elements for labelling, contains** Lithium chloride

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**Hazard pictogramme(s)**



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**Signal word** Warning

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**Hazard statements (H-statement)** H315: Causes skin irritation.

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**Precautionary Statements (P-statement)**

P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P332+P313: If skin irritation or rash occurs: Get medical advice/attention.

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

Not applicable.

### Additional Labelling Elements

Safety data sheet available on request.

### 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 inorganic substances

#### Hazardous ingredients

Substance name	CAS-No.	EC-No.	REACH-No.
Lithium chloride	7447-41-8	231-212-3	-
Conc. (w/w %)	Classification acc. to DSD	Classification acc. to CLP	Note
≥ 1 – ≤ 10 %	 Xn, R22, Xi, R 36/38	 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]

[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. Consult a doctor if feeling unwell.

Skin contact: Wash off with plenty of water. Remove contaminated clothing.

Eye contact: Rinse off with plenty of water. Call an ophthalmologist.

Ingestion: Immediately make victim drink water (two glasses at most). Consult a physician, possible.

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

Irritant effects, drowsiness, diarrhoea, nausea, vomiting, circulatory collapse, tiredness, impairment of vision.

### 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: none

### 5.3 Advice for fire fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or

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by wearing suitable protective clothing (see Section 8).  
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. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area. Wear appropriate protective equipment (see Section 8).

#### 6.2 Environmental precautions

Do not allow to enter drains or aquatic systems.

#### 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 generation of dusts.

#### 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 inhalation of dusts. Avoid generation of dusts. Observe label precautions.  
Precautions against fire and explosion: No special measures necessary.

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

##### Technical measures and storing conditions

Keep container tightly closed. Keep dry at 10...25 °C

##### 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, 5.1A, 6.2, 7.

Joint storage with products of storage classes 2.1, 3, 4.1A, 4.2, 4.3, 5.1B-C, 5.2, 6.1A-B allowed, if specific conditions are kept (for further information: see Section 7.2 TRGS 510).

Storage class: 6.1 B

#### 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
-	-	-	-	-

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

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### DNEL- / DMEL-Value

<b>Substance</b>	Lithium chloride
<b>EC-No.</b>	231-212-3
<b>CAS-No.</b>	7447-41-8

Exposure Route	Species	Time of exposure/ Effect	Value	Note
Dermal	worker	Longterm /systemic	30,54 mg/kg	Fremd-SDB
Inhalative	worker	Longterm /systemic	2,69 mg/m <sup>3</sup>	Fremd-SDB
Dermal	worker	Shortterm/systemic	100 mg/kg	Fremd-SDB
Inhalative	worker	Shortterm /systemic	8,07 mg/m <sup>3</sup>	Fremd-SDB

### PNEC-Value

<b>Substance</b>	Lithium chloride
<b>EC-No.</b>	231-212-3
<b>CAS-No.</b>	7447-41-8

Environmental compartment	Species / Time of exposure / Effect	Value
Soil	-	0,24 mg/kg
STP	-	140,2 mg/l
Marine water	-	0,12 mg/l
Marine water sediment	-	0,478 mg/kg
Fresh water sediment	-	4,78 mg/kg
Fresh water	-	1,2 mg/l

## 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.

<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 clothing.	
<b>Skin protection</b>	Protective clothing.	
<b>Hand protection</b>	Nitrile rubber (reference substance: lithium chloride)	
	Full contact:	Splash contact:
<b>Glove material</b>	Nitrile rubber	Nitrile rubber
<b>Glove thickness (mm)</b>	≥ 0.11 mm	≥ 0.11 mm

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<b>Break through time (min)</b>	≥ 480 min	≥ 480 min
	<p>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.</p> <p>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.</p> <p>The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.</p>	
<b>Respiratory protection</b>	Respiratory protection in case of dust formation. Filtering device: Filter P2.	
<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.

### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Solid
<b>Form</b>	Powder
<b>Particle size</b>	Not determined
<b>Colour</b>	Light beige
<b>Odour</b>	Not applicable
<b>Odour threshold</b>	Not applicable
<b>pH</b>	Final pH at 25°C: 7.2 ± 0.2
<b>Melting point / freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Lower flammability or explosive Limits</b>	No data available
<b>Upper flammability or explosive Limits</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Vapour pressure</b>	Not applicable
<b>Relative density</b>	Not applicable
<b>Solubility(ies)</b>	Soluble (at 20 °C)
<b>Partition coefficient; n-octanol/water</b>	No data available

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<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Thermal decomposition</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive properties</b>	The product itself is not explosive.
<b>Oxidising properties</b>	The product itself is not oxidizing.

### 9.2 Other Information

<b>Density</b>	No data available
<b>Bulk density</b>	No data available
<b>Further information</b>	Not applicable

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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

### 10.2 Chemical Stability

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

### 10.3 Possibility of hazardous reactions

See Section 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: none.

## SECTION 11: Toxicological Information

### 11.1 Information on toxicological effects

Mixture:

#### Acute Toxicity

Exposition	LD50/LC50-Value	Species/test system	Source
Oral	10076 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.

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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.  
Further toxicological information: No data available.  
Other information: No data available.

**Components:** Lithium chloride

#### Acute Toxicity

Exposition	LD50/LC50-Value	Species/test system	Source
Oral	526 mg/kg	Rat	ECHA
Inhalative	> 5.57 mg/L	Rat	ECHA
Dermal	> 2000 mg/kg	Rat	ECHA

#### Skin irritation

Possible damages: Causes skin irritations

#### Eye irritation

Possible damages: Irritating to eyes

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Mixture

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

Further information on ecology: Do not allow to run into surface water, wastewater or soil..

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**Components:** Lithium chloride

Toxicity	Species/test system	Value
Toxicity to fish		
LC50	Oncorhynchus mykiss (rainbow trout), OECD 203, 96h	158 mg/l
Toxicity to aquatic invertebrates		
EC50	Daphnia magna (water flea), OECD 202, 48 h	249 mg/l
Toxicity to aquatic algae and cyanobacteria		
EC50	Desmodesmus subspicatus (green algae), OECD 201, 72 h	400 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.

### SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

### 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: Not subject to Directive 96/82/EG.

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: 1 (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 Information: None.

Full text of R-phrases referred to under Sections 2 and 3



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R-phrases	Text
22	Harmful if swallowed.
36/38	Irritating to eyes and skin.

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

H-statement	Text
302	Harmful if swallowed.
315	Causes skin irritation.
319	Causes serious eye irritation.

**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.