

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 12.05.2020

Version 5.4

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

### 1.1 Product identifier

Catalogue No.	110675
Product name	GIOLITTI-CANTONI broth (Base) acc. ISO 6888 GranuCult ®
REACH Registration Number	This product is a mixture. REACH Registration Number see section 3.

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

Identified uses	Biochemical research/analysis For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ).
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### 1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0
Responsible Department	LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a>

### 1.4 Emergency telephone number

**Please contact the regional company representation in your country.**

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2, H319

Skin sensitisation, Category 1, H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

*Hazard pictograms*



*Signal word*

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## Warning

### *Hazard statements*

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

### *Precautionary statements*

#### Prevention

P280 Wear protective gloves.

#### Response

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.

### **Reduced labelling (≤125 ml)**

#### *Hazard pictograms*



#### *Signal word*

Warning

#### *Hazard statements*

H317 May cause an allergic skin reaction.

#### *Precautionary statements*

P280 Wear protective gloves.

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

## **2.3 Other hazards**

None known.

## **SECTION 3. Composition/information on ingredients**

Chemical nature

Mixture of inorganic and organic compounds

### **3.1 Substance**

Not applicable

### **3.2 Mixture**

#### **Hazardous components (REGULATION (EC) No 1272/2008)**

##### *Chemical name (Concentration)*

CAS-No.	Registration number	Classification
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Lithium chloride (>= 5 % - < 10 % )

*Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.*

7447-41-8	01-2119560574-35-XXXX
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Acute toxicity, Category 4, H302
Skin irritation, Category 2, H315
Eye irritation, Category 2, H319

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Pyruvic acid sodium salt ( $\geq 3\%$  -  $< 10\%$ )

113-24-6      01-2120767047-  
50-XXXX

Eye irritation, Category 2, H319  
Skin sensitisation, Sub-category 1B, H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

irritant effects, Allergic reactions, Nausea, Vomiting, Drowsiness, Diarrhoea, cardiovascular disorders, Tiredness, Impairment of vision

The following applies to lithium compounds in general: when handled or used inappropriately, the absorption of large quantities is followed by CNS disorders, agitation, spasms, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance.

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Mixture with combustible ingredients.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

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## *Special protective equipment for firefighters*

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

## *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **6.4 Reference to other sections**

Indications about waste treatment see section 13.

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## **SECTION 7. Handling and storage**

### **7.1 Precautions for safe handling**

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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

#### *Storage conditions*

Tightly closed. Dry.

Recommended storage temperature see product label.

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## **SECTION 8. Exposure controls/personal protection**

### **8.1 Control parameters**

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## Derived No Effect Level (DNEL)

### *Lithium chloride (7447-41-8)*

Worker DNEL, acute	Systemic effects	dermal	100 mg/kg Body weight
Worker DNEL, acute	Systemic effects	inhalation	30 mg/m <sup>3</sup>
Worker DNEL, longterm	Systemic effects	dermal	73,2 mg/kg Body weight
Worker DNEL, longterm	Systemic effects	inhalation	10 mg/m <sup>3</sup>
Consumer DNEL, longterm	Systemic effects	dermal	72,3 mg/kg Body weight
Consumer DNEL, longterm	Systemic effects	inhalation	10 mg/m <sup>3</sup>
Consumer DNEL, longterm	Systemic effects	oral	7,32 mg/kg Body weight

## Predicted No Effect Concentration (PNEC)

### *Lithium chloride (7447-41-8)*

PNEC Fresh water	10,4 mg/l
PNEC Fresh water sediment	49,9 mg/kg
PNEC Marine water	1,004 mg/l
PNEC Marine sediment	4,99 mg/kg
PNEC Soil	4,13 mg/kg
PNEC Sewage treatment plant	140,2 mg/l

## 8.2 Exposure controls

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### *Eye/face protection*

Safety glasses

#### *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm

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Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

*Other protective equipment*  
protective clothing

#### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

#### **Environmental exposure controls**

Do not let product enter drains.

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## **SECTION 9. Physical and chemical properties**

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

Form	solid
Colour	beige
Odour	peptone-like
Odour Threshold	No information available.
pH	6,8 - 7,0 at 54 g/l 20 °C (after autoclaving)
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.

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Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	No information available.
Relative density	No information available.
Water solubility	54 g/l at 100 °C soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Bulk density	ca.500 kg/m3
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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

Exothermic reaction with:

Alkali metals, halogen-halogen compounds

Violent reactions possible with:

Strong oxidizing agents, Strong acids, strong alkalis

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## 10.4 Conditions to avoid

no information available

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

*Acute oral toxicity*

Acute toxicity estimate: > 2.000 mg/kg

Calculation method

*Acute inhalation toxicity*

Symptoms: Possible symptoms:, mucosal irritations

*Acute dermal toxicity*

This information is not available.

*Skin irritation*

This information is not available.

*Eye irritation*

Mixture causes serious eye irritation.

*Sensitisation*

Mixture may cause an allergic skin reaction.

*Germ cell mutagenicity*

This information is not available.

*Carcinogenicity*

This information is not available.

*Reproductive toxicity*

This information is not available.

*Teratogenicity*

This information is not available.

*Specific target organ toxicity - single exposure*

This information is not available.

*Specific target organ toxicity - repeated exposure*

This information is not available.

*Aspiration hazard*

This information is not available.

### 11.2 Further information

After absorption of toxic quantities:



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Drowsiness, Impairment of vision, lack of appetite, change in weight, Tiredness, Diarrhoea, Vomiting, Nausea, cardiovascular disorders, disturbed electrolyte balance.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## Components

### *Lithium chloride*

#### *Acute oral toxicity*

LD50 Rat: 526 mg/kg  
(RTECS)

#### *Acute inhalation toxicity*

LC50 Rat: > 5,57 mg/l; 4 h ; aerosol  
OECD Test Guideline 403

#### *Acute dermal toxicity*

LD50 Rat: > 2.000 mg/kg  
OECD Test Guideline 402

#### *Skin irritation*

Rabbit  
Result: Irritations

(IUCLID)

#### *Eye irritation*

Rabbit  
Result: Eye irritation  
OECD Test Guideline 405

#### *Sensitisation*

Buehler Test Guinea pig  
Result: negative  
Method: OECD Test Guideline 406

#### *Germ cell mutagenicity*

##### *Genotoxicity in vitro*

Ames test  
Result: negative

(Lit.)

### *Pyruvic acid sodium salt*

#### *Acute oral toxicity*

LD50 Rat: 5.600 mg/kg  
(External MSDS)

#### *Skin irritation*

In vitro study  
Result: No skin irritation  
OECD Test Guideline 439

#### *Eye irritation*

In vitro study  
Result: non-corrosive  
OECD Test Guideline 437

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In vitro study  
Result: positive  
OECD Test Guideline 492

*Sensitisation*  
Local lymph node assay (LLNA) Mouse  
Result: positive  
Method: OECD Test Guideline 429

The value is given in analogy to the following substances: 2-Oxopropanoic acid methyl ester

*Repeated dose toxicity*  
Rat  
male and female  
Inhalation  
aerosol  
28 d  
NOAEL: 0,034 mg/l  
OECD Test Guideline 412

Subchronic toxicity

*Germ cell mutagenicity*  
*Genotoxicity in vitro*  
Ames test  
Escherichia coli/Salmonella typhimurium  
Result: negative  
Method: OECD Test Guideline 471

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

#### 12.6 Other adverse effects

Discharge into the environment must be avoided.

### Components

#### *Lithium chloride*

*Toxicity to fish*  
static test LC50 Oncorhynchus mykiss (rainbow trout): 158 mg/l; 96 h  
Analytical monitoring: yes  
OECD Test Guideline 203

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*Toxicity to daphnia and other aquatic invertebrates*  
static test EC50 Daphnia magna (Water flea): 249 mg/l; 48 h  
Analytical monitoring: yes  
OECD Test Guideline 202

*Toxicity to algae*  
static test EC50 Desmodesmus subspicatus (green algae): > 400 mg/l; 72 h  
Analytical monitoring: yes  
OECD Test Guideline 201

static test EC10 Desmodesmus subspicatus (green algae): 80 mg/l; 72 h  
Analytical monitoring: yes  
OECD Test Guideline 201

#### *Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

#### *Pyruvic acid sodium salt*

*Biodegradability*  
81,6 %; 28 d; aerobic  
OECD Test Guideline 301D  
Readily biodegradable

*Partition coefficient: n-octanol/water*  
log Pow: -5,05 (25 °C)  
(calculated)  
Bioaccumulation is not expected.

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### **Land transport (ADR/RID)**

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### **Inland waterway transport (ADN)**

Not relevant

### **Air transport (IATA)**

**14.1 - 14.6** Not classified as dangerous in the meaning of transport regulations.

### **Sea transport (IMDG)**

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## 14.1 - 14.6

Not classified as dangerous in the meaning of transport regulations.

## 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

#### EU regulations

Major Accident Hazard Legislation	SEVESO III Not applicable
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Occupational restrictions	Take note of Dir 94/33/EC on the protection of young people at work.
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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	not regulated
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Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC	not regulated
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Substances of very high concern (SVHC)	This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of $\geq 0.1\%$ (w/w).
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#### National legislation

Storage class	10 - 13
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### 15.2 Chemical safety assessment

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

## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

### Training advice

Provide adequate information, instruction and training for operators.

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## Labelling

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

*Precautionary statements*

Prevention

P280 Wear protective gloves.

Response

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.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

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