

Material Safety Data sheet

Section 1: Product and Company Information

Product Name	BOLTON Selective Enrichment Broth		
Catalogue Number	i23468	Technical Phone	0098 21 66787291
E-mail	ibresco@gmail.com	Fax No	09391003565
Company Address	Zist Kavosh Iranian, No.432, East Kokab Av,45 Metri Golshahr, Karaj, Iran.		

Section 2: Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Serious eye damage (Category 1), H318

Skin sensitization (Sub-category 1B), H317

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ eye protection/ face protection.

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

P305 + P351 + P338 +

P310

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

none

Section 3: Composition / Information on Ingredients

Mixture

Synonyms BOLTON Broth (Base)

Component		Classification	Concentration*
2-Oxoglutaric acid			
CAS-No.	328-50-7	Eye Dam. 1; H318	>= 1 - < 5 %
EC-No.	206-330-3		
sodium carbonate			
CAS-No.	497-19-8	Eye Irrit. 2A; H319	>= 1 - < 5 %
EC-No.	207-838-8		
Index-No.	011-005-00-2		
Registration number	01-2119485498-19- XXXX		
Pyruvic acid sodium salt			
CAS-No.	113-24-6	Eye Irrit. 2A; Skin Sens. 1B; H319, H317	>= 1 - < 5 %
EC-No.	204-024-4		
Registration number	01-2120767047-50-XXXX		
sodium metabisulphite			
CAS-No.	7681-57-4	Acute Tox. 4; Eye Dam. 1; Aquatic Acute 3; H302, H318, H402	>= 1 - < 5 %
EC-No.	231-673-0		
Index-No.	016-063-00-2		
Registration number	01-2119531326-45-XXXX		

* Weight %

Section 4: First Aid Measures

Description of first-aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call-in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Hydrogen chloride gas

Sodium oxides

Mixture with combustible ingredients.

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

Advice 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/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

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.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

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.

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Storage conditions Tightly closed. Dry.

Storage class Storage class (TRGS 510): 11: Combustible Solids

Section 8: Exposure Controls / Personal Protection

Control parameters**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
sodium metabisulphite	7681-57-4	TWAEV	5 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	5 mg/m ³	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.			

		TWA	5 mg/m3	Canada. British Columbia OEL
		TWA	5 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.

Skin protection

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

Section 9: Physical and Chemical Properties

Physical state	powder
Color	light yellow
Odor	No data available
Odor Threshold	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Flash point	No data available
Vapor pressure	No data available
Vapor density	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available

pH	7.4 at 13.8 g/l at 25 °C (77 °F)
Viscosity	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Density	No data available
Relative density	No data available
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Other safety information	No data available

Section 10: Stability and Reactivity

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.

Chemical stability

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

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects

Mixture

Oral: No data available

Symptoms: Possible symptoms: mucosal irritations

Acute toxicity

Acute toxicity estimates Dermal - > 5,000 mg/kg
(Calculation method)

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Mixture causes serious eye damage.

Respiratory or skin sensitization

Mixture may cause an allergic skin reaction.

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard No data available

Additional Information To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Other dangerous properties cannot be excluded.
Handle in accordance with good industrial hygiene and safety practice.

Components

2-Oxoglutaric acid

Acute toxicity LD50 Oral - Rat - male and female - > 5,000 - 10,000 mg/kg
(OECD Test Guideline 401)
Inhalation: No data available
Dermal: No data available
Skin - Rabbit

Skin corrosion/irritation Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Eyes - Rabbit

Serious eye damage/eye irritation Result: Causes serious eye damage.
(OECD Test Guideline 405)

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity No data available

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

sodium carbonate

Acute toxicity LD50 Oral - Rat - male and female - 2,800 mg/kg
Remarks: (ECHA)
Inhalation: No data available
LD50 Dermal - Rabbit - > 2,000 mg/kg
(US-EPA)
No data available
Skin - Rabbit

Skin corrosion/irritation Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Eyes - Rabbit

Serious eye damage/eye irritation Result: Eye irritation
(US-EPA)

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity No data available

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

Pyruvic acid sodium salt

Acute toxicity Oral: No data available
Inhalation: No data available
Dermal: No data available

Skin corrosion/irritation Skin - reconstructed human epidermis (RhE)
Result: No skin irritation - 42 min
(OECD Test Guideline 439)

Serious eye damage/eye irritation Eyes - In vitro study
Result: Causes serious eye irritation. - 6 h
(OECD Test Guideline 492)

Respiratory or skin sensitization Local lymph node assay (LLNA) - Mouse
Result: positive
(OECD Test Guideline 429)
Test Type: Ames test

Germ cell mutagenicity Test system: Escherichia coli/Salmonella typhimurium
Result: negative

Carcinogenicity No data available

Reproductive toxicity No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

sodium metabisulphite

LD50 Oral - Rat - male and female - 1,540 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5.5 mg/l
- aerosol
(OECD Test Guideline 403)

Acute toxicity Remarks: (in analogy to similar products)
The value is given in analogy to the following substances:
sodium sulphite
LD50 Dermal - Rat - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances:
sodium sulphite
No data available
Skin - Rabbit

Skin corrosion/irritation Result: No skin irritation - 4 h
(OECD Test Guideline 404)
Eyes - Rabbit

Serious eye damage/eye irritation Result: Causes serious eye damage.
(OECD Test Guideline 405)
Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Prolonged or repeated exposure may cause allergic reactions in certain sensitive

	individuals.
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available

Section 12: Ecological Information

Toxicity

Mixture	No data available
Persistence and degradability	No data available
Bio accumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not Conducted.
Endocrine disrupting properties	No data available
Other adverse effects	No data available

Components

2-Oxoglutaric acid

Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 102 mg/l - 72 h (OECD Test Guideline 201)

sodium carbonate

Toxicity to fish	static test LC50 - Lepomis macrochirus (Bluegill sunfish) – 300 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Ceriodaphnia (water flea) - 220 – 227 mg/l - 48 h Remarks: (ECHA)

Pyruvic acid sodium salt

No data available

sodium metabisulphite

Toxicity to fish	static test LC50 - Leuciscus idus (Golden orfe) – 316 mg/l – 96 h (DIN 38412 part 15)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 89 mg/l - 48 h Remarks: (ECHA)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - 43.8 mg/l - 72 h

Toxicity to bacteria (OECD Test Guideline 201)
static test EC50 - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)

Section 13: Disposal Consideration

Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Section 14: Transport Information

TDG	Not regulated as a dangerous good
IMDG	Not dangerous goods
IATA	Not dangerous goods
Further information	Not classified as dangerous in the meaning of transport regulations.

Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Section 16: Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. *ibresco* shall not be held liable for any damage resulting from handling or from contact with the above product.

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