

BISMUTH SULPHITE AGAR

A strongly selective medium for the isolation of *Salmonella* spp. including *Salmonella typhi*.



Dehydrated media

Code number:	450 g: BSA20450
	packaging: 450 g agar base + 3 x 1 l indicator
	4,5 kg: BSA24500
	packaging: 4,5 kg agar base + 30 x 1 l indicator
Appearance of agar base:	Yellowish, homogeneous hygroscopic powder
Appearance of indicator:	Greenish grey suspension
pH before autoclaving (25 °C):	7,0 – 7,4

Direction: Suspend **15 g agar base** in 400 ml of distilled water and heat with frequent agitation until the medium boils well. Sterilise by autoclaving at 121 °C for 15 minutes. Cool down and add aseptically **100 ml of Bismuth Sulphite Indicator**. Mix well before pouring.

Warning!

- Before use warm up the indicator to room temperature carefully. The crystals precipitated during chilled storage must be redissolved completely. Several refrigeration – warm up process do not cause any damage.
- 2. To ensure homogeneity shake well the indicator before use.
- 3. Immediately after its preparation, the medium has optimal selectivity which gradually decreases over time. For this reason it is not recommended to store the ready to use medium more than 4 days at 2-8 °C.

Prepared media

Bottled media:	100 ml: BSA30100
	packaging: 80 ml agar base + 20 ml indicator
	500 ml: BSA30500
	packaging: 400 ml agar base + 100 ml indicator
Plated media:	55 mm: BSA50055, 90 mm: BSA50090
Colour of bottled media:	Yellowish, transparent
Colour of plated media:	Light green – cream, homogeneous turbid
pH (25 °C):	7,1 – 7,3

Direction: Supplement the melted bottled media according to the direction of the dehydrated media and dispense aseptically into sterile Petri-dishes. Media in Petri-dishes are ready to use.

FORMULA OF COMPLETE MEDIUM in g/l

Peptones	14,700
Glucose	5,000
Ammonium iron(II) sulphate	0,300
Bismuth sulphite indicator	6,000
Brilliant green	0,016
Buffers	5,000
Agar	15,000

Note: The typical formula can be adjusted to obtain optimal performance.

Storage conditions: Store the dehydrated media tightly closed in a dry place at room temperature. Store the bottled media protected from light at room temperature. Store the indicator and the plated media protected from light at 2-8 °C. Use before the expiry date on the label.

Quality control:

Test strains	Incubation temp: 37 °C	Growth	Incubation time: 48 h
<i>Salmonella typhi</i>	ATCC 19430	Good, black centre of the colonies usually appears	
<i>Salmonella typhimurium</i>	ATCC 14028	Good, black colonies with metallic sheen	
<i>Escherichia coli</i>	ATCC 25922	Inhibited, greenish to colourless colonies	
<i>Proteus mirabilis</i>	ATCC 29906	Inhibited, brownish colonies	

References: Wilson and Blair (1972) J. Hyg. Camb. 26: 37

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according to Regulation (EC) No. 2015/830

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name (dehydrated and bottled media): Bismuth Sulphite Agar***

Product name (plated media): Bismuth Sulphite Agar

Code number: BSA

(*** kit consists of two components)

Components of dehydrated media kit: 1. component: Bismuth Sulphite agar base
2. component: Bismuth Sulphite indicator

Components of bottled media kit: 1. component: Bismuth Sulphite agar base
2. component: Bismuth Sulphite indicator

Registration number: -

CAS number: -

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

Recommended use: Microbiological diagnostics

Uses advised against: No information available

1.3 Details of the supplier of the safety data sheet

Manufacturer/distributor: BIOLAB Inc.
H-1141 Budapest, Öv u. 43.
Hungary

Telephone: +36-1-221-9614

Fax: +36-1-364-2006

E-mail: export@biolab.hu

1.4 Emergency telephone number

Emergency telephone: Please contact the regional Authority in your country.

4. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2 Label elements

Labelling in accordance with Regulation (EU) No. 1272/2008:

Signal word: -

Hazard Statements (H phrases): -

Precautionary Statements (P phrases): -

Pictograms: -

2.3 Other hazards

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

It is not necessary to publish the components.

Harmful components according to Regulation (EU) No. 1272/2008

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Component	Classification	Concentration
Brilliant green		
CAS-No. 633-03-4 EU-No. 211-190-1	Acute Tox. 4; Eye Irrit. 2; H302, H319; P305+351+338	< 1%
Full text of H- and P-phrases: see section 16.		

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Consult a physician. Show the label and this safety data sheet to the doctor in attendance. Never administer anything orally to persons who are unconscious.

After inhalation: Remove the victim from exposure and move into open air. Consult a physician.

After skin contact: Remove contaminated clothing. Flush the skin with water, then wash thoroughly with soap and water.

After eyes contact: Rinse out eyes with plenty of clean and cold water while pulling eyelids up, and seek medical assistance.

After ingestion: Rinse the mouth with water and seek immediate medical attention. Never administer anything orally to persons who are unconscious. Never induce vomiting.

4.2 Most important symptoms and effect, both acute and delayed

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed

No information available

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In case of fire: Carbon-oxides, nitrogen oxides.
Thermal decomposition can lead to release of irritating gases and vapore.

5.3 Advice for fire-fighters

Wear self contained breathing equipment for firefighting.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dusts; do not inhale dusts. Provide appropriate exhaust ventilation. Use personal protective clothing.

6.2 Environmental precautions

Prevent the contamination of drains, surface or subterranean waters, and the ground.

6.3 Methods and material for containment and cleaning up

Take up dry. Keep in suitable, closed containers for disposal. Clean up affected area.

6.4 Reference to other sections

Refer to protective measures listed in Section 8 and 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special requirement.

Avoid direct contact with the material, spillage, ingestion, eye and skin contact, inhalation. No eating and smoking during working. In the application area, smoking, eating and drinking must be prohibited. Bathing facilities with hot water, emergency douche and eye irrigator have to be ensured. Wash hands after working with the product.. Remove contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Store the dehydrated media tightly closed in a dry place at room temperature. Store the bottled media protected from light at room temperature. Store the supplements and the plated media protected from light at 2-8 °C (It is not recommended to store the ready to use medium more than 4 days).

7.3 Specific end use(s)

Use in laboratories.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

The product does not contain substances with Professional Exposure Environmental Limit Values.

Exposure limits

Allowable workplace concentration (AK) (mg/m³): No information available

Workplace peak concentration: (CK) mg/m³: No information available

Biological exposure: No information available

8.2 Exposure controls

General instructions

Avoid direct contact with the material, spillage, ingestion, eye and skin contact, inhalation. No eating and smoking during working. Bathing facilities with hot water, emergency douche and eye irrigator have to be ensured. Wash hands after working with the supplement. Remove contaminated clothing.

Personal protection: Wear protection clothing, remove the contaminated clothing.
Wash hands after working with the substance.

Personal protection equipment: respirator required (type P1) when dusts are generated

Eye protection: safety glasses are required

Hand protection: use disposable gloves (nitrile caoutchouc 0,11 mm,
breakthrough time 0,11 mm, breakthrough time 480 min.

and wash hands after working with this substance

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance (dehydrated medium): Homogeneous hygroscopic powder

Colour (dehydrated medium): Yellowish

Odor (dehydrated medium): No information available

pH before autoclaving (25 °C): 7,2 approx.

Water solubility: > 30 g/l

Appearance (bottled medium): Gel

Colour (bottled medium): Yellowish, transparent

Appearance (plated medium): Homogeneous turbid gel

Colour (plated medium): Light green - crwam

Odor (ready to use medium): No information available

pH (ready to use medium, 25 °C): 7,1 – 7,3

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Appearance (indicator):	Greenish grey suspension
Odor threshold:	No information available
Melting point/range:	No information available
Flash point:	No information available
Evaporation rate:	No information available
Flammability (solid, gas):	No information available
Flammability range:	No information available
Vapor pressure:	No information available
Vapor density:	No information available
Relative density:	No information available
Partition coefficient (n-octanol/water):	No information available
Autoignition temperature:	No information available
Decomposition temperature:	No information available
Viscosity:	No information available
Explosive properties:	No information available
Oxidizing properties:	No information available

9.2 Other information

No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No information available

10.2 Chemical stability

Stable under the recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions

No information available

10.4 Conditions to avoid

Strong heating, in case of powdered media: risk of powder explosion

10.5 Incompatible materials

No information available

10.6 Hazardous decomposition products

See details in section 5.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:	No information available
Skin irritation/corrosion:	No information available
Serious eye damage/irritation:	No information available
Respiratory or skin sensitization:	No information available
Germ cell mutagenicity:	No information available
Carcinogenicity:	No component of this product present at levels greater than or equal to 0,1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	No information available
STOT – single exposure:	No information available
STOT – repeated exposure:	No information available
Aspiration hazard:	No information available

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12. ECOLOGICAL INFORMATION

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

No information available

12.6. Other adverse effects

Do not dispose of the residue into water, sewage or soil.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Residue is classified as hazardous.

Contaminated packaging: Handle contaminated empty packaging in the same way as the substance itself.

Waste treatment regulations: Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1 UN-number

ADR/RID: -

IMDG:-

IATA:-

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: no

IMDG: no

IATA: no

14.4 Packaging

ADR/RID: no

IMDG: no

IATA: no

14.5 Environmental Hazards

ADR/RID: no

IMDG: no

IATA: no

14.6 Special precautions for user

No special precautions required

14.7 Transport in bulk according to Annex II of MARPOL and the IBC code

Not applicable, packaged goods

15. REGULATORY INFORMATION

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 1907/2006 (REACH) and 1272/2008 EK (CLP-GHS)

15.2 Chemical safety assessment

There has been no evaluation a chemical safety assessment of the product.

16. OTHER INFORMATION

Full text of H- and P- phrases:

H302	Harmful if swallowed.
H319	Causes serious eye irritation

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

During recent review the Safety Data Sheet was revised completely.

The information in this Safety Data Sheet is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.

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