



SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2019
Date Updated: September 30, 2019

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

Product Name Agar A
Product Code(s) FB0010
Recommended Use For Laboratory Research Use Only
Not for Human or Animal Drug Use

Supplier Bio Basic Inc.
Address 20 Konrad Crescent, Markham, Ontario,
Canada, L3R 8T4
Telephone (905) 474 4493
Fax (905) 474 5794
For Chemical Emergency Phone# (416) 995 9730

SECTION 2. ----- HAZARDS IDENTIFICATION -----

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight %
Agar A	232-658-1	9002-18-0	<100

SECTION 4. ----- FIRST-AID MEASURES -----

Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

Storage class (TRGS 510): 13: Non Combustible Solids

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Control parameters

Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

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).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of

contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Splash contact Material:

Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

Information on basic physical and chemical properties

- | | |
|---|-------------------------------------|
| a) Appearance | Form: powder
Colour: beige |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | 5.0 - 7 at 15 g/l at 50 °C (122 °F) |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | ()No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |

- l) Vapour density No data available
- m) Relative density No data available
- n) Water solubility No data available
- o) Partition coefficient: No data available n-octanol/water
- p) Auto-ignition temperature No data available
- q) Decomposition temperature No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

Other safety information

No data available

SECTION 10. -----STABILITY AND REACTIVITY -----

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 11,000 mg/kg
Inhalation: No data available Dermal: No data available
No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 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 data available

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

RTECS: Not available

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

SECTION 12. ----- ECOLOGICAL INFORMATION -----**Toxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative 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

Other adverse effects

No data available

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14. ----- TRANSPORT INFORMATION -----**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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 -----

Further information: no limited for paper copy, just for internal uses.
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Issuing Date: 30-Sept-2019

End of SDS



CERTIFICATE OF ANALYSIS

Product	Agar-A
Product Code	FB0010
Lot	

Test Items	Specifications	Results
Appearance	White to light cream powder	
Particle Size	95% passes 60 mesh sieve	
Moisture	12% or less	
Ash	6.5% or less	
Heavy Metals	≤20 ppm	
Arsenic	≤3 ppm	
Lead	≤5 ppm	
Mercury	≤1 ppm	
Cadmium	≤1 ppm	
pH in Gel	6.0-7.5 (1.5% sol)	
Turbidity	6 NTU or less (Hach, 1.5% sol)	
Colorimetry	(n m u 450)	
Gel Strength	600-900 g/cm ² (Nikan, 1.5% sol)	
Gel Point	32-38°C (1.5% sol)	
Melting Point	80-90°C (1.5% sol)	
<i>Microbiological Analysis</i>		
Total Plate Count	<5000/g	
Coliforms	Absent	
<i>Staphylococci</i>	Absent	
<i>Salmonella</i>	Absent	

Storage: R.T. Protect from moisture

Product Information

AGAR-A

Product information for FB0010:

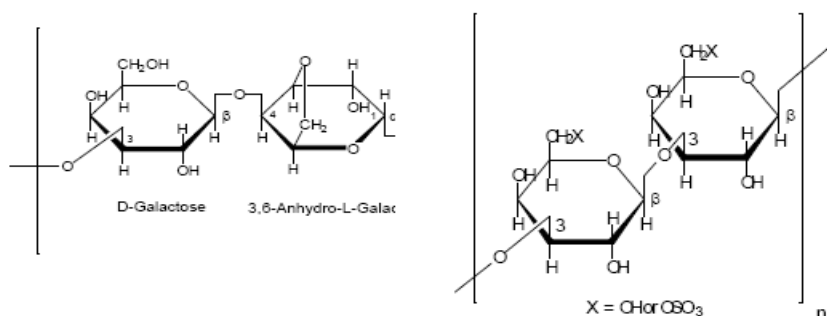
Description

Agar is a polysaccharide complex obtained through bleaching and hot water extraction of agarocytes from the red alga *Rhodophyceae*, found in the Pacific and Indian Oceans and in the Sea of Japan. The genera *Gelidium*, *Acanthopeltis*, *Ceramium*, *Pterocladia* and *Gracilaria* predominate in agar production. Agar is composed of about 70% agarose and 30% agarpectin.

Agarose: A neutral gelling fraction which consists of a linear polymer of alternating D-galactose and 3,6-anhydrogalactose units.

Agarpectin: A non-gelling fraction which consists of \exists -1,3-glycosidically linked D-galactose units, some of which are sulfated at position 6.

Agar-A is bacteriology grade agar of highest quality.



Product Properties

Appearance: White or light cream

Molecular weight: N/A

CAS NUMBER: 9002-18-0

Stability / Storage as supplied

Store at room temperature.

Solubility / Solution Stability

Agar is strongly hydrophilic and can slowly absorb about 20 times its weight of cold water, swelling in the process. The solubility of agar powder was tested in water at 1 mg/ml with boiling, and obtains a clear, colorless solution. Agar is not soluble in alcohol.



After autoclaving, a solution of 1.5% Agar-A is light amber color completely free of insoluble particulate. Agar-A solidifies into a haze-free, firm-surface gel. Color: white or light cream. pH: 6.0-7.5 (1.5% of solution). It is suitable for microbiological and tissue media.

Applications

Agar is used in microbiology and bacteriology to make solid culture media for microorganisms; as an antistaling agent in bakery products, confectionery, meats and poultry; as a gelling agent in cosmetics, desserts and beverages; as a corrosion inhibitor; in sizing for paper and silks; in adhesives; in the dyeing and printing of textiles and fabrics; and as a protective colloid in ice cream, pet foods, health foods, laxatives, pharmaceuticals, dental impressions, lab reagents and photographic emulsions.

Related Products

Code	Product Name	Grade	Difference	Usage
FB0010	Agar A	Bacteriological	This is the most popular agar for use in dehydrated culture media. It is highly processed to remove any impurities that can inhibit microorganisms.	All three of these agars are used in culture media but are used in different formulas with the Bacteriological Agar used primarily in very selective media where total growth potential is expected. The other two agars are used in less sensitive media formulas.
FB0012	Agar B	Pharmaceutical	This agar is slightly less expensive agar made from a slightly different manufacturing process than the Bacteriological Agar.	
G1253	Agar C	Technical	This agar is the least expensive grade agar and is manufactured with a slightly different manufacturing process.	
G243	Agar D (Purified)	Biotech	This is the most expensive agar that has received the most meticulous manufacturing processing to remove impurities.	