Agar powder, Bacteriological Grade

GRM026

Intended use

Agar powder, Bacteriological Grade is manufactured from species of red seaweeds by observing good manufacturing practice. It is a Bacteriological grade powder with high mineral/metal content and is advantageous to use in certain media. It is recommended for use in bacteriological culture media and plant tissue culture media, where clarity and compatibility are not of prime importance.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. It is biological origin product since variation in colour of powder and clarity may observed.
2. Each lot of the product has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's requirement.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium prepared by the product.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance :** Cream coloured powder homogeneous free flowing powder
- **Solubility :** Freely soluble in hot water at temperatures above 85°C. Insoluble in cold water.
- **Clarity :** A firm solid, clear to slightly opalescent gel is formed at a concentration of 1.5% at 38-40°C.
- **Dye Diffusion :** Agar dye diffusion :- 18-20mm
- **pH :** pH of 1.5% w/v aqueous solution at 25 °C 6.5 - 7.5
- **Identification test :** As per method specified in USP 2022

  A: Infrared absorption

  B: Iodine TS colours some of the fragments of the Agar bluish black, with some areas reddish to violet.

  C: Agar forms a clear liquid that congeals at 30-39 ° C to form a firm resilient gel, which does not liquefy below 80°C.
- **Microbial Load :**

  Bacterial Count : <= 1000 CFU/gram by plate method, when incubated at 30-35ºC for not less than 3 days

  Yeast & mould Count : <= 100 CFU/gram by plate method, when incubated at 20-25ºC for not less than 5 days.
- **Test for pathogens :** 1. *Escherichia coli*- Absent/gram of sample 2. *Salmonella* species- Absent/10 gram of sample 3. *Pseudomonas aeruginosa*- Absent/gram of sample 4. *Staphylococcus aureus*- Absent/gram of sample 5. *Candida albicans*- Absent/gram of sample 6. *Clostridia*- Absent/gram of sample

- **Test for Water absorption :** As per method specified in USP 2022
  NMT 75 ml of water is absorbed by 5.0 g of agar
- **Limit of Gelatin :** As per method specified in USP 2022 No yellow precipitate is formed.
- **Limit of Foreign Starch :** As per method specified in USP 2022
  The sample solution does not, upon cooling ,produce a blue colour upon the addition of iodine TS.
- **Growth Promotion Test :** As per method specified in USP 2022
- **Cultural response :** Cultural response observed after an incubation at 35-37°C for 18-24 hours by preparing Nutrient Agar (M001) using Agar Powder, Bacteriological as an ingredient.

Cultural Response

Organism	Growth
Escherichia coli ATCC 25922 (WDCM00013)	Luxuriant
Pseudomonas aeruginosa ATCC 27853 (WDCM 00025)	Luxuriant
Staphylococcus aureus subsp. *aureus* ATCC 25923(WDCM 00034)	Luxuriant
Salmonella enterica subsp. *enterica* Typhi ATCC 6539	Luxuriant
Streptococcus pyogenes ATCC 19615	Luxuriant
Salmonella enterica subsp.*enterica* Enteritidis ATCC 13076 (WDCM 00030)	Luxuriant
Salmonella enterica subsp. *enterica* Typhimurium ATCC 14028 (WDCM 00031)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 9610 (WDCM 00038)	Luxuriant
Yersinia enterocolitica subsp. *enterocolitica* ATCC 23715 (WDCM 00160)	Luxuriant

Chemical Analysis :

Gelling temperature : 38-40°C

Melting Range : ≥85°C

Water (KF) : ≤20%

Calcium (Ca) : ≤ 0.1%

Arsenic (As) : ≤3 ppm

Lead(Pb) : ≤ 10 ppm

Acid- Insoluble Ash (On dry-Weight basis) : ≤0.5%

Total Ash (On dry-weight basis) : ≤6.5%

Foreign organic matter : ≤1.0%

Limit of Foreign insoluble matter : ≤15 mg in 7.5 gm of Agar

Gelling Strength : ≥ 800g/cm^2

Storage and Shelf Life

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Below 30°C Storage temperature

Do not use if package is damaged

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Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications.The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory,diagnostic, research or further manufacturing use only, unless otherwise specified.Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.