PRODUCT SPECIFICATION SHEET

Eugonic Broth (DM501)

Intended Use

Eugonic Broth (DM501) is recommended for cultivation of fastidious microorganisms like *Haemophilus, Neisserria, Pasteurella, Brucella* and *Lactobacillus* species.

Product Summary and Explanation

Eugonic Agar is prepared according to the formula described by Pelczar and Vera[1] for cultivation of fastidious organisms like *Brucella* and can be used with or without enrichment. Eugon media were developed to obtain eugonic (luxuriant) growth of fastidious microorganisms like *Brucella* which are otherwise difficult to cultivate.[2] Enriched with blood, Eugon Agar supports the growth of pathogenic fungi including *Nocardia*, *Histoplasma* and *Blastomyces*. With the addition of Supplement B, excellent growth of *Neisseria*, *Francisella* and *Brucella* is achieved. The unenriched medium supports rapid growth of lactobacilli associated with cured meat products, dairy products and other foods. Niven[3] reported the use of Eugon Agar for the detection of lactic acid in cured meats, and recommended it for investigating spoilage in meats. Harrison and Hansen[4] employed the medium for plate counts of the intestinal flora of turkeys. Frank[5] showed its usefulness in germinating anaerobic spores pasteurized at 104°C. Organisms like *Bordetella* and *Neisseria* proliferate in Eugonic Broth because large amount of sulfur and carbon sources have been added in the formulation. Therefore Eugonic Broth is recommended for the direct isolation of *Bordetella pertussis* and *Neisseria meningitides* from the test materials such as throat mucus, blood, cerebrospinal fluid, pleural fluid and other specimens. For the isolation of *Bacillus pumilus*, Eugonic Broth can be supplemented with 0.1% starch, prior to sterilization.[2]

Principles of the Procedure

Eugonic Broth contains peptones casein enzymic hydrolysate and papaic digest of soyabean meal provides the nitrogen, vitamins and amino acids, which supports the growth of fastidious microbial species. The high concentration of dextrose is the energy source for rapid growth of bacteria. Sodium chloride maintains the osmotic balance of the media. L-Cystine and sodium sulphite are added to the medium in order to stimulate growth. The high carbohydrate content along with high sulfur (cystine) content improves growth with chromogenicity.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	15.00
Papaic digest of soyabean meal	5.00
Dextrose	5.00
Sodium chloride	4.00
Sodium sulphite	0.20
L-Cystine	0.20
Final pH: 7.0 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

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Directions

1. Suspend 29.4 grams of the medium in one liter of distilled water.
2. Heat to boiling, to dissolve the medium completely, with frequent agitation to avoid charring.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Cool to 40-45°C and add 5 -10% v/v sterile defibrinated blood if desired. The blood may be chocolated by heating.
5. Mix well and pour into sterile desired containers.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured, clear solution in tubes
Reaction of 2.94% Solution	pH : 7.0 ± 0.2 at 25°C
Gel Strength	Not Applicable

Expected Cultural Response: Cultural characteristics observed with added 5-10% sterile defibrinated blood after an incubation at 35-37°C for 48 hours (fungal cultures incubated at 25-30°C).

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Bacillus pumilus ATCC 14884*	50 - 100	Good (with 0.1% starch)
2.	*Brucella abortus ATCC 4315*	50 - 100	Good (under 3-5% CO2)
3.	*Candida albicans ATCC 26790*	50 - 100	Good
4.	*Lactobacillus fermentum ATCC 9338*	50 - 100	Good
5.	*Neisseria meningitidis ATCC 13090*	50 - 100	Good
6.	*Streptococcus pneumonia ATCC 6303*	50 - 100	good-luxuriant (under 3-5% CO2)
7.	*Streptococcus pyogenes ATCC 19615*	50 - 100	good-luxuriant (under 3-5% CO2)

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Organisms to be cultivated must first be isolated in pure culture on an appropriate solid medium.
2. Transfer fresh growth from the subculture medium to the tubed medium, using a sterile inoculating loop or needle.
3. Incubate under conditions appropriate for the organism being cultivated. Broth cultures should be held at least 1 week before discarding as negative.

Results

1. Growth in tubes is indicated by the presence of turbidity compared to an uninoculated control.
2. If growth appears, cultures should be further examined by Gram staining, subculturing onto appropriate media and incubating inoculated media aerobically with increased CO_2 and/or anaerobically.

Storage

Store the sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

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Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Eugonic Broth
Product Code : DM501
Available Pack sizes : 500gm

References

1. Vera, H. D. 1947. The ability of peptones to support surface growth of lactobacilli. J. Bacteriol. 54:14.
2. MacFaddin, J. D. 1985. Media for the isolation-cultivation-identification-maintenance of medical bacteria, vol. 1, p. 131-143. Williams & Wilkins, Baltimore, MD.
3. Niven. 1949. J. Bacteriol. 58:633.
4. Harrison, A. P., Jr., and P. A. Hansen. 1950. The bacterial flora of the cecal feces of healthy turkeys. J. Bacteriol. 59:197.
5. Frank, H. A. 1955. The influence of various media on spore count determinations of a putrefactive anaerobe. J. Bacteriol. 53:561.

Further Information

For further information please contact your local MICROMASTER Representative.

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		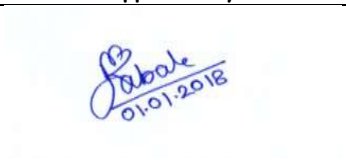
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