



PRODUCT SPECIFICATION SHEET

Glucose Broth (DM321)

Intended Use

Glucose Broth (DM321) is recommended for study of dextrose fermentation where pH indicator is not desired.

Product Summary and Explanation

Waisbren, Carr and Dunnett used Glucose Broth for testing antibiotic sensitivity by the tube dilution method.⁽¹⁾ This medium is also used to study glucose fermentation where pH indicator is not desired. This version of Glucose broth is formulated without the ingredients like beef extract that would contain small amount of carbohydrates, so that glucose the single carbohydrate in the medium. It is a liquid culture medium for faster growth since most microorganisms can use Glucose as their energy source. Thus, the glucose fermentation studies can be performed more accurately using only pure 0.5% glucose as the source of carbohydrate. It's simple formulation makes this medium useful for checking gas production from Glucose if Durham's tubes are used. It does not contain any indicator that could interfere it.

Principles of the Procedure

Glucose Broth contains casein enzymic hydrolysate which provides carbon, nitrogen, amino acids and other essential nutrients for bacterial metabolism. The casein enzymic hydrolysate used is free of carbohydrates and glucose is the fermentable carbohydrate source for the bacteria. Sodium chloride maintains osmotic equilibrium of the medium. The broth gives rapid growth and hastens the early development of injured cells.

Formula / Liter

Ingredients	Gms / Liter
Casein enzymic hydrolysate	10.00
Glucose	5.00
Sodium chloride	5.00
Final pH: 7.3 ± 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.

Directions

1. Suspend 20 grams of the medium in one liter of distilled water.
2. Heat if necessary to dissolve the medium completely.
3. Dispense in tubes containing inverted Durhams tubes. Sterilize by autoclaving at 118°C for 15 minutes.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured, clear solution without any precipitate
Reaction of 2.0% Solution	pH 7.3 ± 0.2 at 25°C
Gel Strength	Not Applicable

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Gas
1.	<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	positive reaction
2.	<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	negative reaction
3.	<i>Shigella flexneri</i> ATCC 12022	50-100	good-luxuriant	negative reaction
4.	<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	negative reaction
5.	<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	good-luxuriant	negative reaction
6.	<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant	negative reaction

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





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Test Procedure

Refer appropriate references for standard test procedures.

Results

Refer appropriate references and procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

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 : Glucose Broth

Product Code : DM321

Available Pack sizes : 100gm/500gm

References

1. Oskar Klotz, Temporary Alteration of character of an organism belonging to the colon group. J. of Medical Research, 1994,6, 475.

Further Information

For further information please contact your local MICROMASTER Representative.



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