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**Glucose Broth (Dextrose Broth)**

Glucose Broth is used for study of glucose (dextrose) fermentation where a pH indicator is not desired.

|  |  |
| --- | --- |
| REF: V.1/DB01.100 100 Gram  REF: V.1/DB01.500 500 Gram | REF: V.1/DB01.250 250 Gram |

# CLINICAL SIGNIFICANCE

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. Glucose Broth was developed to exclude the ingredients like beef extract that would contain small amount of carbohydrates. Thus the glucose fermentation studies can be performed more accurately using only pure 0.5% glucose as the source of carbohydrate.

**METHOD PRINCIPLE**

# Casein enzymic hydrolysate and glucose serve as sources of essential nutrients and energy respectively to support the growth of many fastidious organisms. The casein enzymic hydrolysate used is free of carbohydrates and glucose acts as source of energy by being the only fermentable carbohydrate. The broth gives rapid growth and hastens the early development of injured cells. Sodium chloride maintains the osmotic equilibrium.

# MEDIA COMPOSITION

|  |  |
| --- | --- |
| **Item** | **Formula per**  **liter of medium** |
| * Casein enzymic hydrolysate * Glucose * Sodium chloride | 10  5  5 |

**PRECAUTIONS AND WARNINGS**

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

* Wearing personnel protective equipment (overall, gloves, glasses,).
* Do not pipette by mouth.
* In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
* Respect country requirement for waste disposal.

S56: dispose of this material and its container at hazardous or special waste collection point.

S57: use appropriate container to avoid environmental Contamination.

S61: avoid release in environment.

For further information, refer to the Glucose Broth (Dextrose Broth)

material safety data sheet.

# STORAGE AND STABILITY

**Lab.Vie**.Glucose Broth (Dextrose Broth) dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

***Final pH 7.3 ± 0.2 at 25°C***

# MEDIA PREPARATION

1. Suspend 20 grams in 1000 ml distilled water.
2. Adjust pH to 7.3 ± 0.2 at 25°C
3. Heat if necessary to dissolve the medium completely.
4. Dispense in tubes containing inverted Durhams tubes.
5. Sterilize by autoclaving at 118°C for 15 minutes.

**Deterioration**

The color of **Lab.Vie**.Glucose Broth (Dextrose Broth) is Cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

The hydrated medium is Light yellow coloured, clear solution without any precipitate, media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

# SPECIMEN COLLECTION AND PRESERVATION

Food samples; Water and sewage samples

# EQUIPMENT REQUIRED NOT PROVIDED

* Sterile cups
* Sterile tubes
* Sterile loops
* Incubator

# PERFORMANCE CHARACTERISTICS

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

|  |  |  |
| --- | --- | --- |
| **SYMBOLS IN PRODUCT LABELLING** | | |
| **IVD** | For in-vitro diagnostic use | Number of <n> test in the pack |
| **LOT** | Batch Code/Lot number | Caution |
| **REF** | Catalogue Number | Do not use if package is damaged |
|  | Temperature Limitation | Consult Instruction for use |
|  | Expiration Date |  |
|  | Manufactured by |  |

# Cultural characteristics observed after an incubation at 30ºC for 40-48 hours.

|  |  |  |
| --- | --- | --- |
| **Test Organisms** | **Growth** | **Gas** |
| Escherichia coli ATCC 25922 | Good - Luxuriant | positive reaction |
| Salmonella Typhi ATCC 6539 | Good - Luxuriant | negative reaction |
| Shigella flexneri ATCC 12022 | Good - Luxuriant | negative reaction |
| Staphylococcus aureus ATCC 25923 | Good - Luxuriant | negative reaction |
| Staphylococcus epidermidis ATCC 12228 | Good - Luxuriant | negative reaction |
| Streptococcus pyogenes ATCC 19615 | Good - Luxuriant | negative reaction |

# QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **Lab.Vie**. technical support.

# REFERENCES

1. Waisbren, Carr and Dunnett, 1951, Am. J. Clin. Path., 21:884.

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