3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

70187 Glucose Broth (Dextrose Broth)

A liquid medium for the isolation, cultivation and enumeration of different microorganisms; useful for the detection of dextrose-utilization (after addition of a pH-indicator)

Composition:

Ingredients	Grams/Litre
Peptone (from Casein)	10.0
Dextrose	5.0
Sodium chloride	5.0
Final pH 7.2 +/- 0.2 at 37°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.
Appearance: Faintly yellow coloured, homogeneous, free flowing powder.
Color and Clarity: Faintly brownish-yellow coloured clear solution.

Direction:
Add 20 g to 1 litre of distilled water. Mix well, distribute into final containers and sterilize by autoclaving at 121°C for 10 minutes.

Principle and interpretation:
This version of Glucose broth is formulated without meat extract in order to make Dextrose 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. But this medium has the drawback of not being buffered. Thus the strong acidification during fermentation may affect its performance.hence, though it is used, though it is used often in blood cultures, it has been replaced by other, more buffered media.
Due to the relatively high Glucose share, it is recommended to use the freshly prepared medium with a short sterilization period. Otherwise toxic furfurals may be produced.
On the other hand, its simple formulation makes this medium for checking gas production from Glucose if Durham's tubes are used. It does not contain any indicator that could interfere it.

Cultural characteristics after 24-48 hours at 35°C.

Organisms (ATCC)	Growth
Bacillus cereus (11778)	+++
Enterococcus faecalis (19433)	+++
Staphylococcus aureus (25923)	+++
Escherichia coli (25922)	+++
Pseudomonas aeruginosa (27853)	+++
Candida albicans (10231)	+++

References:

1. APHA, Recommended Methods for the Microbiological Examination of Food, APHA Inc, Ney York, 1958
2. F P Downes, K Ito, Compendium of Methods for the Microbiological Examination of Food 4th ed, APHA, Washington, 2001
3. J D MacFaddin, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, William & Wilkins Co, Baltimore, 1985