

**B. Q. VACCINE MEDIUM
(THIOGLYCOLLATE BROTH W/ LIVER EXTRACT)**
TM 216

For mass cultivation of anaerobes for vaccine production

Composition

Ingredients	Gms/Ltr.
Liver tissues, infusion from	250.00
Muscle tissues, infusion from	250.00
Peptic digest of animal tissue	10.00
Sodium chloride	5.00
Dipotassium phosphate	4.00
Sodium thioglycollate	1.00

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 30gms in 1000 ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 0.5% sterile glucose solution. Mix well and dispense into sterile test tubes.

Appearance: Light yellow colour, clear solution

pH (at 25°C): 8.2 ± 0.2

Principle

B. Q. VACCINE MEDIUM or THIOGLYCOLLATE BROTH W/LIVER EXTRACT is used for mass cultivation of anaerobic culture for vaccine production. The ingredients of the medium Peptic digest of animal tissue supply the nitrogenous compounds and growth nutrients for microorganisms. Liver extract and Muscle extract provide trace minerals and vitamins for the growth of wide variety of microorganisms. Thioglycollate broth contains sodium thioglycollate which is a reducing agent that creates anaerobic condition when it reduces molecular oxygen to water. Both facultative anaerobes and aero tolerant will grow throughout the tubes, facultative anaerobes will grow most densely where oxygen is present. Dipotassium phosphate and Sodium chloride helps in maintaining buffering action and isotonic conditions respectively in the medium. Added glucose, act as the source of energy. ****Anaerobes grow in the lower part of the culture.** Tested on *Bacillus*, *Candida* and *Clostridium* sp. showed good growth after an incubation period maintained at suitable temperature.

Interpretation

Cultural characteristics observed after inoculating (10³CFU/ml), on incubation at 35 ± 2°C for 24 – 48 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth
<i>Bacillus subtilis</i>	6633	10 ³	Luxuriant
<i>Candida albicans</i>	10231	10 ³	Luxuriant
<i>Clostridium perfringens</i>	12924	10 ³	Luxuriant
<i>Neisseria meningitidis</i>	13090	10 ³	Luxuriant

References

1. Brewer J. H., J. Am Med. Assoc., 115, 598. (1940).
2. Brewer J. H., J. Bacteriol. 39:10. (1940).
3. American Public Health Association: Compendium of methods for the microbiological examination of foods. - 3rd ed. (1992).
4. European Pharmacopeia II, Chapter VIII. 3. United States Pharmacopeia XXIII, Chapter "Microbial Limit Tests", (1995).