PRODUCT DATA SHEET

BAIRD STAPHYLOCOCCUS ENRICHMENT BROTH BASE TM 670

For selective enrichment of pathogenic *Staphylococci*

Composition

Ingredients	Gms/Ltr.
Glycine	12.00
Sodium pyruvate	10.00
Peptic digest of animal tissue	8.00
Meat extract	5.00
Lithium chloride	5.00
Casein enzymatic hydrolysate	2.00
Yeast extract	1.00

* Dehydrated powder store, in a dry place in tightly- sealed containers below 25^{0}C and protected from direct sunlight.

Instructions for Use

Dissolve 43.00gms in 1000 ml of 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 40 - 45°C and aseptically add 1% of Potassium Tellurite solution (TS 005).

Appearance: Light yellow in colour, clear to slightly opalescent gel
pH (at 25°C): 6.6 ± 0.2

Principle

BAIRD STAPHYLOCOCCUS ENRICHMENT BROTH BASE is developed by "**Zebovitz**" et al from the formulation of tellurite glycine for selective enrichment of pathogenic *Staphylococci*. *Staphylococcus* is a genus of Gram positive, nonspore-forming cocci belonging to the family *Micrococcaceae* that are often found as normal human micro biota of the skin and nasal cavity. There are five organisms to consider as potential human pathogens in this genus: *S.aureus, S. epidermidis, S. saprophyticus, S. haemolyticus*, and *S. hominis* but the first three are the most common isolates. *S. aureus* is often considered to be the most problematic of the three pathogens and is distinguished from the other two by being the only one able to coagulate plasma. *S. aureus* is able to cause many superficial pyogenic (pus-forming) infections of the dermis and underlying tissues as well as serious systemic infections. It can produce a range of toxins including enterotoxins (food poisoning), cytotoxins (general systemic toxins), and toxic shock super antigens. The other coagulase- negative staphylococci (*S. epidermidis* and *S. saprophiticus*) are much less frequently found as pathogens but are occasionally associated with endocarditis, prosthetic joint infections, and wound infections. Medium composed of Peptic digest of animal tissue, Casein enzymatic hydrolysate that provides nitrogen, vitamins, minerals and amino acids essential for bacterial growth. Yeast extract and Meat extract is a source of vitamins, particularly the B-group. Sodium pyruvate not only protects injured cells and helps recovery but also stimulates *Staphylococcus aureus* growth without destroying selectivity. Lithium chloride and potassium tellurite inhibit most of the contaminating micro flora except *Staphylococcus aureus*. Glycine, Pyruvate enhances growth of *Staphylococcus*.

Interpretation

Cultural characteristics observed after inoculating (10^3CFU / ml), on incubation at 35 ± 2°C for 18 - 24 hors

Microorganism	ATCC	Growth
Staphylococcus aureus	6538	Good- luxuriant
Staphylococcus aureus	25923	Good- luxuriant
Bacillus subtilis	6633	Poor-none

References

1. Zebovitz E, Evans J B and Niver CF, 1955 J. Bact, 70: 686.