Reference : 03-454 ***Scharlau Microbiology* - Technical data sheet**

Product :
STUART RINGERTZ TRANSPORT MEDIUM

Specification

Medium used for the maintenance and transport of pathogenic specimens or fastidious microorganisms from clinical or other origins.

Formula * in g/L

Sodium glycerophosphate.....10,000
Sodium thioglycolate..... 1,000
Calcium chloride.....0,100
Methylene blue.....0,002
Agar.....8,000

Final pH 7,4 ±0,2 at 25 ºC

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 19 g of powder in 1 L of distilled water and bring to the boil. Distribute in tubes or flasks and close with an air tight cap in such a way that the medium forms a vertical column of 7-10 cm. Sterilize in the autoclave at 121ºC for 15 minutes and cool quickly in the vertical position.

Description

The growth of microorganisms in this medium is restricted by the total lack of nitrogen, but they remain alive and inactive for a long periods thanks to the buffering and protective effect of glycerophosphate. Thioglycolate provides a reducing environment which is aided and maintained by the low concentration of agar, which prevents the occurrence of convection streams and restricts oxygen diffusion. Progressive oxidation of the medium can be seen by the change in colour the methylene blue, which acts as an *Eh* (redox) indicator.

Technique

The sample is placed directly inside the tube, taking care that it is beneath the blue band. If the sample is taken with a swab, it is advisable to impregnate it with a suspension of active carbon (activated charcoal) before putting it into the transport medium. The sample must always be in the centre of the medium and beneath the blue band that indicates oxidation. If the depth of the blue band is bigger than half of the medium, do not use the tube.

Precautions and Limitations of the Procedure:
Optimal growth and typical morphology can only be expected following direct inoculation and appropriate cultivation.
- Prior to use, the medium should not be incubated to check the sterility.
- The sterility of the medium can be verified using sterile control samples (uninoculated swabs). This medium must not be employed subsequently.
- The medium can maintain the viability of several microorganisms for transport purposes only. It should not be used as a storage or enrichment medium.
- The results obtained from this medium are dependent on the quality of the specimen and on the time elapsed from collection until analysis in the laboratory. The viability of the cells will diminish over time and some overgrowth of accompanying microbiota can occur during prolonged periods of transit.
- Survival of bacteria in a transport medium depends up on the formulation and on many other factors including media type, the number of organisms in the specimen, the temperature and duration of transport. Inoculation of appropriate culture media should be carried out within 24 hours.

Quality control

Incubation temperature: 37 ºC±1,0 **Incubation time:** 24 h

Inoculum: Swab impregnated in bacterial suspension. Keep the inoculum at 4±1ºC / 22±1ºC during 24- 48 h. Recover and inoculate suitable medium.

Microorganism	Growth	Remarks
Salmonella typhimurium ATCC® 14028	Good	Satisfactory recovery in TSA
Shigella sonnei ATCC® 9290	Good	Satisfactory recovery in TSA
Klebsiella pneumoniae ATCC® 10031	Good	Satisfactory recovery in TSA
Streptococcus pneumoniae ATCC® 49619	Good	Satisfactory recovery in Blood A.

References

· RINGERTZ, O. (1960) A modified Stuart medium for the transport of gonococcal specimens. Acta Path. Microbiol. Scand. 48:105-112.

· STUART, R.D. (1959) Transport medium for specimens in public health bacteriology. Publ. Hlth. Rep. 74:431-438.

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 ºC to 30 ºC).