OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Thiosulphate Ringer Solution Powder

Principle

Thiosulphate ringer solution powder is commonly used in the food, beverage, and dairy industries for verifying the cleanliness and sterility after using hypochlorite solutions for disinfection. It helps neutralize residual chlorine in microbial samples and rinses. Medium contains sodium chloride, calcium chloride dihydrate, and sodium thiosulphate pentahydrate. Sodium chloride helps in maintaining the osmotic balance in the solution, calcium chloride provides calcium ions that help stabilize cell walls and membranes of microorganisms during the sampling process. Sodium thiosulphate is neutralizing any residual chlorine from disinfectants and preventing it from killing or inhibiting the microorganisms in the sample.

Use: For verification of sterility of dairy plant after hypochlorite has been used for disinfection purposes.

Contents*

Ingredients	Gram/Litre
Sodium chloride	2.250
Calcium chloride dihydrate	0.160
Sodium thiosulphate pentahydrate	0.800
pH at 25˚C	6.6 ± 0.1

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 3.21 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C use for sterility test. If required adjust the pH with sterile 1N HCl or 1N NaOH.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Off white colored free flowing, homogeneous powder**
Reaction of 0.32% solution	**6.60 at 25 ˚C**
pH	**6.50 to 6.70**
Color and clarity of ready medium	**Colorless clear solution**
Negative control	**Performed using sterile distilled water**

Different Microbial Response

1. **Add 100 ml of the prepared Thiosulphate Ringer Solution to the 100 ml rinse water sample, which contains 100 ppm hypochlorite.**
2. **Mix thoroughly to ensure the thiosulphate neutralizes any residual chlorine.**
3. **Test the water sample and water sample with RDM-TRSP-01 for microbial contamination using the spread or pour plate method using the media RDM-SCDA-01.**
4. **Incubate the plate at 35±2°C for 18-48 hours for bacteria and for yeast and mold at 25±2°C for 3-5 days.**
5. **Compare the microbial counts from the water sample and water sample with RDM-TRSP-01 to determine the effectiveness of the cleaning process.**

Sterile water with E. coli (Inoculum 50-100 CFU)	**Recovery**
Sterile water and with E. coli (Inoculum 50-100 CFU)	**≥ 90%**
Sterile water, and 100 ppm hypochlorite with E. coli (Inoculum 50-100 CFU)	**≥ 90%**

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **British Pharmacopoeia (1953) p 501.**
2. **Davis J. G. (1956) `*Laboratory Control of Dairy Plant'. Dairy Industries Ltd., London*.**
3. **Egdell J. W., Lomax K. L., Adams R. P. and Aitken M. J. (1958) *J. Appl. Bact.* 21(1). 109-117.**

Disclaimer:

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