

TM 1956 – R-2 A AGAR (AGAR MEDIUM S) (as per EP/BP)

INTENDED USE

For heterotrophic plate count of treated potable water using longer incubation periods.

PRODUCT SUMMARY AND EXPLANATION

R-2 A Agar (Agar Medium S) is used for the heterotrophic plate counts and for sub culturing isolates from potable waters using longer incubation periods as per European Pharmacopoeia 2008. It is recommended for pour plate, spread plate and membrane filter techniques. Plate count recommended for the bacterial examination of potable waters, gives an estimate of the aerobic and facultatively anaerobic bacteria, which grow best at 35°C on a rich medium. However, these organisms may represent a small number of total bacteria as other bacteria are either unable to grow under these conditions, or grow very slowly which cannot be detected in 48 hours.

R-2 A Agar is modified for better recovery of these bacteria from treated waters under different incubation conditions. Many bacteria from natural waters, which contain limited nutrients at ambient temperature, grow best on the media with less nutrient levels. Moreover, they grow better at the temperatures below the routine laboratory incubation temperatures of 35 to 37°C.

COMPOSITION

Ingredients	Gms / Ltr
Casein Hydrolysate	0.500
Yeast extract	0.500
Proteose peptone	0.500
Glucose	0.500
Starch	0.500
Dipotassium hydrogen phosphate	0.300
Magnesium sulphate	0.024
Sodium pyruvate	0.300
Agar	15.000

PRINCIPLE

This medium is a low nutrient medium consisting of less proteose peptone, yeast extract and glucose as compared to Standard Methods Agar. This medium allows the growth of stressed, injured and chlorine tolerant bacteria present in treated waters due to the presence of pyruvate and starch. The number of colonies on a plate is reported as CFU (Colony Forming Units) per volume of sample.

INSTRUCTION FOR USE

- Dissolve 18.12 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 min. DO NOT OVERHEAT.

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear to slightly opalescent gel forms in petri plates.
pH (at 25°C) : 7.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Candida albicans</i>	10231	10-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
<i>Escherichia coli</i>	8739	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours
<i>Salmonella Enteritidis</i>	13076	50-100	Good-luxuriant	>=0%	30-35°C	24-72 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Good-luxuriant	>50%	30-35°C	24-72 Hours
<i>Salmonella Typhi</i>	6539	50-100	Good-luxuriant	>=50%	30-35°C	24-72 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.










DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. European pharmacopoeia, 2008, European Dept. for the Quality of Medicines.
2. Reasoner and Geldreich, 1985, Appl. Environ. Microbiol., 49:1.
3. Collins and Willoughby, 1962, Arch. Microbiol., 43:294.



 GMP Good Manufacturing Practices Certified	 Best Before	 Quantity	 Catalogue Number	 Manufacturer
 Temperature Unit	 Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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