

Technical Information

Pyrazinamidase Agar

Product Code: DM 2880

Application: - Pyrazinamidase Agar is recommended for identification of *Yersinia* species from food in accordance with FDA BAM, 1998.

Composition**

Ingredients	Gms / Litre
Tryptone	11.250
Soya peptone	3.750
Sodium chloride	3.750
Yeast extract	3.000
Pyrazine-carboxamide	1.000
Agar	11.250

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Pyrazine Amidase Agar (DM2880) is recommended for the identification of *Yersinia* sp. in accordance with FDA BAM, 1998(3). *Yersinia enterocolitica* is a ubiquitous organism, isolated from soil, water, animals, and a variety of foods (1). They comprise a biochemically heterogeneous group that can grow even at refrigerated temperatures. The association of human illness with consumption of *Y. enterocolitica* -contaminated food, animal wastes, and unchlorinated water is well documented (2).

Pyrazinamidase activity distinguish potential pathogenic from nonpathogenic strains of *Y. enterocolitica* in epidemiological surveillance programs. Fully grown culture, on pyrazinamidase agar slants at RT is flooded with 1 ml of 1% freshly prepared ferrous ammonium sulphate over slant. Development of pink color within 15 min is positive test, indicating presence of pyrazinoic acid formed by pyrazinamidase enzyme.

Tryptone, soya peptone and yeast extract supplies nitrogenous, carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Sodium chloride helps to maintain the osmotic balance of the medium. Pyrazine-carboxamide acts as substrate to detect Pyrazinamidase activity.

Methodology

Suspend 34.00 grams of dehydrated powder media in 1000 ml 0.2 M Tris-maleate, pH 6.0. Mix thoroughly & heat to boiling to dissolve the medium completely. Dispense 5ml amount in 16 x 125 mm tubes. Sterilize by autoclaving at 15 lbs pressure (121^oC) for 15 min. After sterilization, cool the tubes in slanted position.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder.

Gelling

Firm, comparable with 1.13% Agar gel.

Colour and Clarity

Light yellow coloured clear to slightly opalescent gel forms in tubes as slants.





Dehydrated Culture Media
Bases / Media Supplements

Cultural Response

DM2880: Cultural characteristics observed after an incubation at 25-30°C for 48 hours. *-After incubation flood 1 ml of 1% freshly prepared ammonium sulphate solution over the slant.

Organism	Growth	Inoculum (CFU)	Recovery
<i>Yersinia enterocolitica</i> ATCC 27729	good-luxuriant	50-100	Variable Positive(development of pink colour within 15 mins)

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on label.

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Sabina, Y., Rahman, A., Ray, R.C. and Montet, D. 2011. Journal of Pathogens, 2011.
2. Aleksic, S., A., Steigerwalt, J., Bockemuhl, G., Huntley-Carter. and Brenner, D.J 1987. Int. J. Syst. Bacteriol, 37: 327-332.
3. FDA, U.S. 1998. Bacteriological Analytical Manual. 8 ed. Gaithersburg, MD: AOAC International.
4. Aulisio, C.C.G., Mehlman, I. J. and Sanders, A.C. 1980. Appl. Environ. Microbiol, 39: 135-140.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
- Central Drug House Pvt. Ltd. reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents. Do not use the products if it fails to meet specifications for identity and performances parameters.

