

Technical Information

A-7 Agar Base (Shepard's Differential Agar Base)

Product Code: DM 2739

Application: - This medium is recommended for the cultivation and differentiation of *Urea plasma urealyticum* from urine, based on its ability to produce ammonia from urea. This medium is also used for the cultivation of other *Urea plasma* species.

Composition**

Ingredients	Gms / Litre
Pancreatic digest of casein	12.830
Agar	15.000
Sodium chloride	3.800
Papaic digest of soyabean meal	2.280
Dipotassium hydrogen phosphate	1.900
Glucose	1.900
Manganese sulphate	0.730
Yeast extract	2.440
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

A-7 Agar Base is recommended for selective cultivation of urogenital *Mycoplasma*, viz. *Ureaplasma urealyticum* from clinical samples based on its ability to produce ammonia from urea (1). The medium contains pancreatic digest of casein and papaic digest of soyabean meal, which provide necessary nutrients for the growth of *Urea plasma*. Yeast extract supplies preformed nucleic acid precursors, necessary for the growth of fastidious *Ureaplasma*.

Many *Mycoplasma /Urea plasma* require serum for their good growth and also the presence of antibiotics is necessary to prevent the growth of contaminating organisms. Sodium chloride helps to maintain the osmotic balance. *Urea plasma* possess the enzyme urease and hence breakdown the urea to ammonia. Bacteria that produce ammonia appear as golden to dark brown coloured colonies (1).

Methodology

Suspend 40.88 grams of dehydrated culture media in 790 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add 195 ml sterile Horse serum (BA 2239), 1 vial of Urea solution (MS 2253) (Filter sterilized) and rehydrated contents of 1 vial each of Urea plasma Selective Supplement (MS 2254) and Urea plasma Growth Supplement (MS 2255). Shake well and dispense as desired.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity

Light yellow coloured clear to slight opalescent solution forms in petriplates.

Reaction

Reaction of 4.08% w/v aqueous solution at 25°C. pH : 6.0±0.2



Dehydrated Culture Media
Bases / Media Supplements

pH Range

5.80-6.20

Cultural Response

DM 2739: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours, with added BA 2239, MS 2253, MS 2254, MS 2255.

Cultural Response

Organism	Inoculum (CFU)	Growth	Urea
<i>Ureaplasma urealyticum</i> ATCC 14027	50-100	Good-luxuriant	positive reaction,

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 the label.

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

Further Reading

1. Atlas R. M. 2004, Handbook of Microbiological Media, 3rd Ed, CRC Press, Boca Raton, Florida.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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