



Agar Powder, Ultra Pure

RM459

Being ultra pure, this agar is recommended for use in immuno-electrophoretic procedures, nutritional studies (vitamin Assay Media) or sensitivity testing procedure, where high purity and good diffusion of substances is essential.

Principle And Interpretation

Agar Powder, Ultra pure is carefully manufactured and purified with utmost care as described by Nobel and Tonney. It is essentially free from impurities. It is light cream coloured, free flowing powder with particles of the size passing through 40 ASTM screen. It readily dissolves in hot or boiling water, but is insoluble in cold water. 1% w/v aqueous solution is clear and viscous.

Quality Control

Appearance

Cream coloured powder, homogenous free flowing powder.

Solubility

Freely soluble in hot water at temperatures above 85°C. Insoluble cold water.

Clarity

A firm solid, clear to slightly opalescent gel is formed at a concentration of 1.5% at 34-37°C.

Dye Diffusion

Agar dye diffusion :- 18-20mm

Reaction

Reaction of 1.5% w/v aqueous solution at 25 °C pH :6.00 - 7.00

Identification test

As per method specified in USP 37,NF32;

A: Infrared absorption.

B: With Iodine, some fragments of agar appear bluish black, with some areas reddish to violet.

C: Agar forms a clear liquid, which congeals at 30 to 39°C to form a firm resilient gel, which does not melt below 80°C.

Microbial Load

Total aerobic microbial count (cfu/gm)

By plate method when incubated at 30-35°C for not less than 3 days.

Total aerobic microbial count : <= 1000 CFU/gram

Total Yeast and mould count (cfu/gm)

By plate method when incubated at 20-25°C for not less than 5 days.

Total yeast & mould Count : <= 100 CFU/gram

Test for Pathogens

1. *Escherichia coli*-Negative in 10 gms of sample 2. *Salmonella* species-Negative in 10 gms of sample 3. *Pseudomonas aeruginosa*-Negative in 10 gms of sample 4. *Staphylococcus aureus*- Negative in 10 gms of sample 5. *Candida albicans*- Negative in 10 gms of sample 6. *Clostridia*- Negative in 10 gms of sample

Test for Water absorption

As per method specified in USP 37,NF32 NMT 75 ml of water is absorbed by 5.0 g of agar

Test for Gelatin

As per method specified in USP 37,NF32 No formation of yellow precipitate

Test for Starch

As per method specified in USP 37,NF32 No Formation of blue colour on addition of iodine

Growth Promotion Test

As per method specified in USP 37,NF32

Chemical Analysis**Gelling temperature**

34-37°C

Melting range

≥85°C

Water(KF)

≤20%

Calcium

≤25 ppm

Heavy metals (as Pb)

≤40 ppm

Lead

≤10 ppm

Arsenic

≤3 ppm

Total ash

≤6.5%

Acid insoluble matter (on dry basis)

≤0.5%

Foreign organic matter

≤1.0%

Foreign insoluble matter

≤15 mg in 7.5 gm of Agar

Cultural Response

Cultural response observed after an incubation at 35-37°C for 18-24 hours by preparing Nutrient Agar (M001) using Agar Powder, Ultra pure as an ingredient.

Organism	Growth
<i>Escherichia coli</i> ATCC 25922	Luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853	Luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	Luxuriant
<i>Salmonella</i> Typhi ATCC 6539	Luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disclaimer :

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