



Agar Powder, Purified

RM201

Principle And Interpretation

Agar Powder, purified is extensively purified by exhaustively extracting Agar with water and organic solvents to remove all nitrogenous compounds, inorganic salts and vitamins. It has low calcium and magnesium levels and is compatible with all culture media. Since it is recommended for culture media and bacteriological work.

Quality Control

Appearance

Cream coloured, 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 36-38°C.

Dye Diffusion

Agar dye diffusion :- 18-20mm

Reaction

Reaction of 1.5% w/v aqueous solution at 25 °C

pH

6.50 - 7.50

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 : \leq 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 : \leq 100 CFU/gram

Test for Pathogens

1. E.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. C.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

36-38°C

Melting range

\geq 85°C

Water(KF)

<=20%

Total Nitrogen(Kjeldhal method)

<=0.15%

Calcium

<= 0.1%

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

Gelling Strength>= 800 g/cm²**Cultural Response**

Cultural response observed after an incubation at 35-37°C for 18-24 hours by preparing Nutrient Agar (M001) using Agar Powder, Purified 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 Typhi</i> ATCC 6539	Luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant

Storage and Shelf Life

Store below 30°C. Use before expiry date on the label.

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