



Agar Agar Type I

GRM666

Principle And Interpretation

Agar Agar Type I is produced for use in bacteriological routine laboratory work, plant tissue culture media, pharmaceutical preparations, where clarity, compatibility are not of prime importance. When suspended in cold water, it swells but does not dissolve. However, it readily dissolves in boiling water and solubility is facilitated by soaking the powder in cold water.

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 38-41°C.

Dye Diffusion

Agar dye diffusion :- 18-20mm

Reaction

Reaction of 1% w/v aqueous solution at 25°C.

pH

6.0- 7.0

Identification test

As per method specified in USP 53,NF3 ;

A: Infrared absorption.

B : Iodine TS colours some of the fragments of Agar bluish black, with some areas reddish to violet.

C : f en lr bkd khpthcsg s bnmfd kr s 2 B sn en l eh l drhkidms fdk vghbg cndr mksptdex adknv 70 B-

Microbial Load

Total aerobic microbial count (cfu/gm)

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

Bacterial 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.

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

Chemical Analysis

Chemical Analysis

Gelling temperature	27,30 B
Melting range	>=85°C
Water KF	0.
Total Nitrogen	<= 0.125%
Arsenic(As)	<= 3 ppm
Lead	<= 10 ppm

Acid insoluble Ash (on -weight basis)	<=0.5%
Total Ash (On dry-weight basis)	<=6.5%
Foreign organic matter	<=1.0%
Limit of Foreign insoluble matter	<=15 mg in 7.5 gm of Agar

Test for Water absorption

As per method specified in USP 42,NF37 NMT 75 ml of water is absorbed by 5.0 g of agar

Limit of Gelatin

As per method specified in USP 42,NF37 No yellow precipitate is formed.

Limit of Foreign Starch

As per method specified in USP 42,NF37 The sample solution does not ,upon cooling ,produce a blue colour upon the addition of iodine TS.

Growth Promotion Test

As per method specified in USP 42,NF37

Cultural response

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

Organism**Growth**

<i>Escherichia coli</i> ATCC 25922 (WDCM00013)	Luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853 (WDCM 00025)	Luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (WDCM 00034)	Luxuriant
<i>Salmonella enterica</i> serovar Typhi ATCC 6539	Luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	Luxuriant
<i>Salmonella enterica</i> serovar Enteritidis ATCC 13076 (WDCM 00030)	Luxuriant
<i>Salmonella enterica</i> serovar Typhimurium ATCC 14028 (WDCM00031)	Luxuriant
<i>Yersinia enterocolitica</i> ATCC 9610 (WDCM 00038)	Luxuriant
<i>Yersinia enterocolitica</i> ATCC 23715 (WDCM 00160)	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.

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