

CN agar

Catalog : HB8484-9-500

Pseudomonas agar base medium /CN agar is used for the selective isolation of *Pseudomonas*, especially for *Pseudomonas aeruginosa*.

Approximate Formula:

Ingredients	gm/liter
Gelatin Peptone	16.0
Acid Hydrolysis of Casein	10.0
Anhydrous Potassium Sulfate	10.0
Anhydrous Magnesium Chloride	1.4
Cetrimide	0.2
Nalidixic Acid	0.015
Agar	15.0
Final pH 7.1±0.2 at 25°C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 50.6g of the medium and 10mL of glycerol in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Dispense into flasks. Sterilize in an autoclave at 121°C (15 lbs.) for 15 minutes.

Principle and Interpretation:

Acid hydrolysis of casein provide the necessary nitrogen compounds, carbon and vitamins for the growth of bacteria. It contains phosphorus, which is stimulatory to fluoescin production by *Pseudomonas*. Anhydrous magnesium chloride provides essential ions for fluoescin production. Gelatin peptone provides amino acids and other essential nitrogenous substances. Magnesium and potassium ions promote pyocyanin production. Glycerol acts as a source of energy and enhances pigment production. Nalidixic Acid can inhibits gram-negative bacteria except pseudomonas. Agar is the solidifying agent.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Pseudomonas agar base medium /CN agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1°C for 24-48 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
<i>Pseudomonas aeruginosa</i>	ATCC 9027	20-200	Luxuriant	≥70%	Green pigment (intensive part);fluorescence (sparse part)
<i>Pseudomonas aeruginosa</i>	ATCC 27853	20-200	Luxuriant	≥70%	Green pigment (intensive part);fluorescence (sparse part)
<i>Escherichia coli</i>	ATCC 25922	>10 ³	Inhibited	/	/
<i>Staphylococcus aureus</i>	ATCC 6538	>10 ³	Inhibited	/	/

References:

- 1.Druggan, P. and Iverson, C. (2012): Culture media for food spoilage bacteria of the order Pseudomonadales: *Pseudomonas*, *Acinetobacter* and *Psychrobacter* spp. In: Handbook of Culture Media for Food and Water Microbiology. (Corry, J.E.L., Curtis, G.D.W. and Baird, R.M. eds.), pp. 482-502. Royal Society of Chemistry, Cambridge, UK.
- 2.Goto, S., and Enomoto, S. (1970): Nalidixic Acid Cetrimide Agar. A New Selective Plating Medium for the Selective Isolation of *Pseudomonas aeruginosa*. Japan. J. Microbiol. 14: 65- 72.
- 3.ISO International Standardisation Organisation. Meat and meat products - Enumeration of presumptive *Pseudomonas* spp. EN ISO 13720:2010.
- 4.ISO International Standardisation Organisation. Water quality -- Detection and enumeration of *Pseudomonas aeruginosa* -- Method by membrane filtration. EN ISO 16266:2006.
- 5.ISO International Standardisation Organisation. Microbiology of food, animal feed and water - Preparation, production, storage and performance testing of culture media. EN ISO 11133:2014.