



PRODUCT SPECIFICATION SHEET

Standard Nutrient Agar No.2 (DM1372)

Intended Use

Standard Nutrient Agar No.2 (DM1372) is recommended for the cultivation and enrichment of less fastidious bacteria, also for detection of inhibitors in bacteriological examination of meat.

Product Summary and Explanation

Fastidious organism is any organism that has a complex nutritional requirement like vitamins, amino acids, nucleic acids, carbohydrates. In general, bacterial pathogens need more preformed organic molecules than non pathogens. Generally to enrich less fastidious organism so as to isolate them from test samples highly nutritional are employed. Standard Nutrient Broth No.2 is used for enrichment of less fastidious bacteria and can also be used for the examination of water.⁽¹⁾ Standard Nutrient Area No.2 can be used in the detection of inhibitors during the bacteriological examination of meat⁽²⁾ and can also be modified with various additives.⁽³⁾

Principles of the Procedure

Standard Nutrient Agar No.2 contains meat peptone and casein enzymic hydrolysate which provides the nitrogenous and carbonaceous substances with other essential nutrients for metabolism. Sodium chloride helps to maintain the osmotic equilibrium of the medium.

Formula / Liter

Ingredients	Gms / Liter
Meat peptone	3.45
Casein enzymic hydrolysate	3.45
Sodium chloride	5.10
Agar	13.00
Final pH: 7.5 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 25 grams of the medium in one litre of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile Petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Dark amber to amber coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 2.5% Solution	pH : 7.5 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.3% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	<i>Escherichia coli</i> ATCC 11775	50-100	good-luxuriant	≥70%
2.	<i>Shigella flexneri</i> ATCC 29903	50-100	good-luxuriant	≥70%
3.	<i>Salmonella Typhimurium</i> ATCC 13311	50-100	good-luxuriant	≥70%
4.	<i>Staphylococcus aureus</i> ATCC 6538 P	50-100	good-luxuriant	≥70%
5.	<i>Streptococcus pyogenes</i> ATCC 21059	50-100	good-luxuriant	≥70%
6.	<i>Listeria monocytogenes</i> ATCC 19118	50-100	good-luxuriant	≥70%

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer appropriate references for standard test procedures.





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Results

Refer appropriate references and procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Standard Nutrient Agar No.2

Product Code : DM1372

Available Pack sizes : 500gm

References

1. Din Deutsches Institut fur Normung e.V: Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung, Mikrobiologische Verfahren (Gruppe K). Nachweis von Pseudomonas aeruginosa (K 8). DIN 38411.
2. Levetzow,R: Untersuchung auf Hemmstoffe im Rahmen der bakteriologischen Fleischuntersuchung, Bundesgesundheitsblatt, 1971.14: 211-213.
3. Zavanella, M., Aurelia, P., a. Ferrini, A.M: Improved microbiological method for the detection of antimicrobial residues in meat.-1986. Arch Lebensmittelhyg.,37:118-120.

Further Information

For further information please contact your local MICROMASTER Representative.



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