

Technical Specification Sheet



Nutrient Agar 1.5% SKU: 700003552, 700003553, 700003554, 700003555 NCM0222

Intended Use

Nutrient Agar 1.5% is used for the cultivation of a wide variety of microorganisms in a laboratory setting. Nutrient Agar 1.5% is not intended for use in the diagnosis of disease or other conditions in humans.

Description

In the early 1900's, the American Public Health Association (APHA) suggested the formula of Nutrient Agar as a standard culture medium used in water testing. Nutrient Agar is specified in many standard method procedures. Nutrient Agar 1.5% is a modification of Nutrient Agar. Nutrient Agar 1.5% is a general purpose medium, with a slightly alkaline pH. This medium contains 0.8% sodium chloride and can be used as a base for enrichment with blood, ascitic fluid, or other supplements for cultivating fastidious microorganisms.

Typical Formulation

Beef Extract	3.0 g/L
Peptone	5.0 g/L
Sodium Chloride	8.0 g/L
Agar	15.0 g/L

Final pH: 7.3 ± 0.2 at 25°C

Formula is adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Preparation

1. Suspend 31 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and beige.

Prepared Appearance: Prepared medium is trace to slightly hazy and beige.

Expected Cultural Response: Cultural response on Nutrient Agar 1.5% incubated aerobically at 35 ± 2°C and examined for growth after 18 - 24 hours.

Microorganism	Approx. Inoculum (CFU)	Expected Results
<i>Bacillus subtilis</i> ATCC® 9372	10 - 300	Growth
<i>Escherichia coli</i> ATCC® 25922	10 - 300	Growth
<i>Salmonella typhimurium</i> ATCC® 14028	10 - 300	Growth
<i>Staphylococcus aureus</i> ATCC® 25923	10 - 300	Growth
<i>Streptococcus pneumoniae</i> ATCC® 6305	10 - 300	Growth
<i>Streptococcus pyogenes</i> ATCC® 19615	10 - 300	Growth

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



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Test Procedure

For a complete discussion on the isolation and identification of aerobic and anaerobic microorganisms, refer to appropriate references.

Results

Refer to appropriate references and procedures for results.

Expiration

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

Limitation of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. Vanderzant, C., and D. F. Splittstoesser (eds.). 2015. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
2. Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (eds.). 2017. Standard methods for the examination of water and wastewater, 23rd ed. American Public Health Association, Washington, D.C.
3. Marshall, R. T. (ed.). 2004. Standard methods for the microbiological examination of dairy products, 17th ed. American Public Health Association, Washington, D.C.
4. Association of Official Analytical Chemists. 2016. Official methods of analysis of AOAC International, 20th ed. AOAC International, Arlington, VA.
5. www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalyticalmanualBAM/default.htm.

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