

Nutrient Agar 1.5%

Intended Use

Nutrient Agar 1.5% is used for cultivating a variety of microorganisms and with the addition of blood or other enrichment can be used for cultivating fastidious microorganisms.

Summary and Explanation

Nutrient Agar 1.5% is a modification of Nutrient Agar.¹ This medium is a slightly alkaline general-purpose medium. Since the medium contains 0.8% sodium chloride, it can be used as a base for enrichment with blood, ascitic fluid or other supplements for cultivating fastidious microorganisms.

Principles of the Procedure

Beef extract and peptone provide the nitrogen, vitamins, amino acids and carbon sources in Nutrient Agar 1.5%. Sodium chloride maintains the osmotic balance so that red blood cells will not rupture when blood is added as supplement.¹ Agar is the solidifying agent.

Formula

Difco™ Nutrient Agar 1.5%

Approximate Formula* Per Liter

Beef Extract.....	3.0	g
Peptone	5.0	g
Sodium Chloride	8.0	g
Agar	15.0	g

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

Directions for Preparation from Dehydrated Product

1. Suspend 31 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Autoclave at 121°C for 15 minutes.
4. To prepare an enriched medium, cool the autoclaved base to 45-50°C and add the desired enrichment. Mix thoroughly.
5. Test samples of the finished product for performance using stable, typical control cultures.

Procedure

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

Expected Results

Refer to appropriate references and procedures for results.

Reference

1. Downes and Ito (ed.). 2001. Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.

Availability

Difco™ Nutrient Agar 1.5%

COMPF

Cat. No. 269100 Dehydrated – 500 g

User Quality Control

Identity Specifications

Difco™ Nutrient Agar 1.5%

Dehydrated Appearance: Beige to light tan, free-flowing, homogeneous.

Solution: 3.1% solution, soluble in purified water upon boiling. Solution is light to medium amber, very slightly to slightly opalescent.

Prepared Appearance: Light to medium amber, very slightly to slightly opalescent.

Reaction of 3.1%
Solution at 25°C: pH 7.3 ± 0.2

Cultural Response

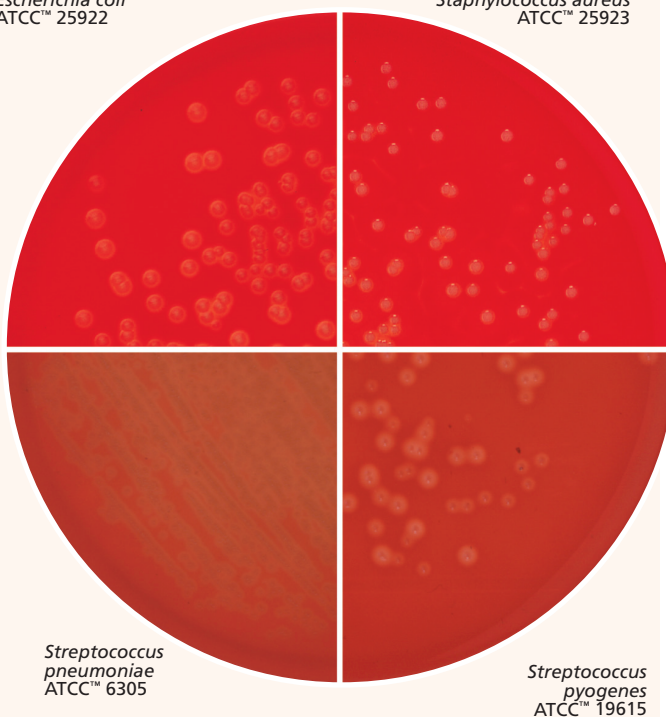
Difco™ Nutrient Agar 1.5%

Prepare the medium per label directions without (plain) and with 5% sheep blood (SB). Inoculate and incubate the plates at 35 ± 2°C for 40-48 hours under appropriate atmospheric conditions.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY PLAIN	RECOVERY WITH SB	HEMOLYSIS
<i>Escherichia coli</i>	25922	10 ² -10 ³	Good	Good	Beta
<i>Neisseria meningitidis</i>	13090	10 ² -10 ³	Good	Good	Gamma
<i>Staphylococcus aureus</i>	25923	10 ² -10 ³	Good	Good	Beta
<i>Streptococcus pneumoniae</i>	6305	10 ² -10 ³	Good	Good	Alpha
<i>Streptococcus pyogenes</i>	19615	10 ² -10 ³	Good	Good	Beta

Escherichia coli
ATCC™ 25922

Staphylococcus aureus
ATCC™ 25923



Streptococcus pneumoniae
ATCC™ 6305

Streptococcus pyogenes
ATCC™ 19615