

COLUMBIA CNA AGAR BASE

INTENDED USE

Remel Columbia CNA Agar Base is a solid medium recommended for use in qualitative procedures for selective isolation of gram-positive cocci.

SUMMARY AND EXPLANATION

Columbia Agar Base was first described by Ellner, Stoessel, Drakeford, and Vasi in 1966 as an improved blood agar base.¹ It was found to be capable of growing fastidious and nonfastidious organisms from clinical specimens. Ellner et al. incorporated colistin and nalidixic acid in the base to produce a selective medium for isolating gram-positive organisms (e.g., streptococci, staphylococci) from specimens containing mixed flora.

PRINCIPLE

Peptones in this medium provide essential growth factors such as nitrogen, carbon, vitamins, and trace elements necessary for bacterial growth. Beef extract and corn starch serve as energy sources and yeast extract supplies B-complex vitamins. Colistin and nalidixic acid inhibit most gram-negative bacilli. Sheep blood, added to the prepared base, provides the X factor (hemin) necessary for the growth of many bacteria and enables the demonstration of hemolytic activity.

REAGENTS (CLASSICAL FORMULA)*

Casein Peptone.....	12.0 g	Corn Starch	1.0 g
Meat Peptone.....	5.0 g	Colistin.....	10.0 mg
Sodium Chloride.....	5.0 g	Nalidixic Acid.....	10.0 mg
Beef Extract.....	3.0 g	Sheep Blood.....	5 %
Yeast Extract.....	3.0 g	Agar.....	13.5 g
		Demineralized Water.....	1000.0 ml

pH 7.3 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PRECAUTIONS

This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM

1. Suspend 42.5 g of medium in 1000 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 15 minutes.
4. Cool medium to 45-50°C and aseptically add defibrinated blood to a final concentration of 5%.
5. Dispense into appropriate containers.

PROCEDURE

1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, testing, and interpretation.

QUALITY CONTROL

Each lot number of Columbia CNA Agar Base has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, sample results should not be reported.

CONTROL

Enterococcus faecalis ATCC® 29212
Staphylococcus aureus ATCC® 25923
Streptococcus pneumoniae ATCC® 6305
Streptococcus pyogenes ATCC® 19615
Escherichia coli ATCC® 25922
Proteus mirabilis ATCC® 12453
Pseudomonas aeruginosa ATCC® 27853

INCUBATION

CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C
CO₂, 18-24 h @ 33-37°C

RESULTS

Growth
Growth
Growth, alpha hemolysis
Growth, beta hemolysis
Inhibition (partial to complete)
Inhibition (partial to complete)
Inhibition (partial to complete)

BIBLIOGRAPHY

1. Ellner, P.D., C.I. Stoessel, E. Drakeford, and F. Vasi. 1966. Am. J. Clin. Pathol. 45:502.
2. Murray, P.R., E.J. Baron, J.H. Jorgensen, M.L. Landry, and M.A. Tenover. 2007. Manual of Clinical Microbiology. 9th ed. ASM Press, Washington, D.C.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, sample collection, storage and transportation, materials required, quality control, and limitations.

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