
WILKINS-CHALGREN BROTH

INTENDED USE

Remel Wilkins-Chalgren Broth is a liquid medium recommended for use in qualitative procedures for the cultivation and isolation of anaerobic bacteria.

SUMMARY AND EXPLANATION

This medium is derived from Wilkins-Chalgren Anaerobic Agar.¹ Wilkins and Chalgren recognized a need for a standard medium for antimicrobial susceptibility testing of anaerobes and developed a formulation that did not require the addition of blood. Today, Wilkins-Chalgren Broth is recommended for the isolation of anaerobic organisms from clinical specimens.

PRINCIPLE

The peptone used in this medium improves the standardization of the medium and supplies nutrients to support the growth of anaerobic bacteria.² Yeast extract supplies vitamins and other growth factors, such as purines and pyrimidines, that stimulate growth of *Peptostreptococcus anaerobius* and *Prevotella melaninogenica*. Arginine is added to support the growth of *Eubacterium lentum*. Sodium pyruvate provides an energy source for asaccharolytic cocci, such as *Veillonella* species, and degrades hydrogen peroxide, which interferes with the metabolism of anaerobes. Hemin is a growth stimulant for *Bacteroides* and vitamin K enables the cultivation of *Bacteroides* species and also stimulates the growth of gram-positive sporeformers.³

REAGENTS (CLASSICAL FORMULA)*

Tryptone	10.0 g	L-Arginine	1.0 g
Gelatin Peptone	10.0 g	Sodium Pyruvate	1.0 g
Yeast Extract	5.0 g	Hemin	5.0 mg
Sodium Chloride	5.0 g	Vitamin K	0.5 mg
Glucose	1.0 g	Demineralized Water	1000.0 ml

pH 7.1 +/- 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE

1. Liquid media for anaerobic incubation should be reduced prior to inoculation by placing the tubes, with caps loosened, under anaerobic conditions for 18-24 hours prior to use.
2. An alternative reducing method requires boiling with caps loosened and cooling to room temperature before inoculation.
3. Inoculate the specimen directly into the broth as soon as possible after it is received in the laboratory.
4. Incubate the tubes anaerobically at 35-37°C for up to 7 days.
5. Growth is indicated by the presence of turbidity when compared to an uninoculated control tube.
6. Subculture to appropriate media for isolation of organisms.

QUALITY CONTROL

All lot numbers of Wilkins-Chalgren Broth 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, patient results should not be reported.

CONTROL

Bacteroides fragilis ATCC® 25285
Clostridium perfringens ATCC® 13124

INCUBATION

Anaerobic, 48 h @ 35-37°C
Anaerobic, 48 h @ 35-37°C

RESULTS

Growth
Growth

BIBLIOGRAPHY

1. Wilkins, T.D. and S. Chalgren. 1976. Antimicrob. Agents Chemother. 10:926-928.
2. Murray, P.R., E.J. Baron, J.H. Jorgensen, M.A. Pfaller, and R.H. Tenover. 2003. Manual of Clinical Microbiology. 8th ed. ASM, Washington, D.C.
3. Gibbons, R.J. and J.B. MacDonald. 1960. J. Bacteriol. 80:164-170.

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

ATCC® is a registered trademark of American Type Culture Collection.

IFU 7322, Revised January 3, 2007

Printed in U.S.A.

remel

12076 Santa Fe Drive, Lenexa, KS 66215, USA

General Information: (800) 255-6730 Technical Service: (800) 447-3641 Order Entry: (800) 447-3635

Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128

Website: www.remel.com Email: remel@remel.com