

## WILKINS CHALGREN MEDIUM II

### CAT Nº: 1568

For the general development and microbial sensitivity test of anaerobic agents from clinical samples

### FORMULA IN g/l

Tryptone	10.00	L-Arginine	1.00
Bacteriological Peptone	10.00	Sodium Pyruvate	1.00
Yeast Extract	5.00	Vitamin K1	0.005
Sodium Chloride	5.00	Hemin	0.005
Dextrose	1.00		

**Final pH 7.1 ± 0.2 at 25°C**

### PREPARATION

Suspend 33 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121°C for 15 minutes. Cool to 45-50°C and aseptically add the desired antibiotics. The prepared medium should be stored at 2-8°C. The color is amber.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

### USES

WILKINS CHALGREN MEDIUM II is used in studies of antimicrobial susceptibilities with both the broth and the agar, standardizing by using identical nutrient formulation media.

This medium is also recommended to grow anaerobic microorganisms. It has the advantage over other media in that it does not need the addition of blood to obtain the satisfactory growth of clinically important anaerobic bacteria.

Yeast extract provides vitamins, particularly the B-group, and other growing factors to cultivate *Bacteroides melaninogenicus* and *Peptostreptococcus anaerobius*. Tryptone and Peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Dextrose is the carbohydrate energy source. L-Arginine provides amino acids for the growth of *Eubacterium lentum*. Sodium pyruvate acts as an energy source for saccharolytic cocci, such as *Veillonella*, and to catalyze and degrade traces of hydrogen peroxide which affects the metabolism of anaerobes. Hemin is essential for the growth of *Bacteroides spp.* Sodium chloride supplies essential electrolytes for transport and osmotic balance.

Inoculate and incubate at a temperature of 35 ± 2°C and observe after 24 – 48 hours.

### MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures after incubation at a temperature of 35 ± 2°C and observed after 24 - 48 hours.

Microorganisms	Growth
<i>Bacteroides fragilis</i> ATCC 25285	Good
<i>Bacteroides melaninogenicus</i> ATCC 25611	Good
<i>Clostridium perfringens</i> ATCC 13124	Good

## BIBLIOGRAPHY

Hall, Jean F. (1971) J. Inst. Brewing 77, 513-516

## STORAGE

Once opened keep powdered medium closed to avoid hydration.

