

# W.L. Differential Broth



Medium used for the isolation and cultivation of bacteria encountered in brewing and industrial fermentation processes.

## • CONTENTS (Liter)

Tryptone	5.0 g
Yeast Extract	4.0 g
Glucose	50.0 g
Monopotassium Phosphate	0.55 g
Potassium Chloride	0.425 g
Calcium Chloride	0.125 g
Magnesium Sulfate	0.125 g
Ferric Chloride	0.0025 g
Manganese Sulfate	0.0025 g
Bromcresol Green	0.022 g
Cycloheximide	0.004 g
Final pH = 5.5 ± 0.2 at 25°C	

## • PROCEDURE

Suspend 60.26 G of powder in 1 L of distilled or deionized water. If desired, adjust the pH of 6.5, add 1% sodium bicarbonate solution. Heat to boiling until completely dissolved. Sterilized by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into tubes.

## • INTERPRETATION

W.L. Differential Broth is a medium used for the isolation and cultivation of bacteria encountered in brewing and industrial fermentation processes. Tryptone, yeast extract and glucose provide nitrogen, carbon, vitamin, amino acids and trace elements. Monopotassium phosphate is the buffering agent. Potassium chloride, calcium chloride, magnesium sulfate, ferric chloride and manganese sulfate provide essential ions and maintain the osmotic balance. Bromocresol green is a pH indicator. Cycloheximide inhibits yeasts and molds.

## • TECHNIC

Inoculate the specimen using a sterile needle to the medium. Incubate at 35 ± 2°C for bacteria and at 30 ± 2°C for yeasts for 40 - 48 hours. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous

Color: light beige with greenish tint

### Prepared medium

Appearance: slightly opalescent

Color: blue to greenish blue

Incubation conditions: 35 ± 2°C for bacteria and at 30 ± 2°C for yeasts / 40 - 48 hours

Microorganism	ATCC	Inoculum CFU	Growth
<i>Escherichia coli</i>	25922	10 <sup>2</sup> -10 <sup>3</sup>	good
<i>Lactobacillus fermentum</i>	9338	10 <sup>2</sup> -10 <sup>3</sup>	good
<i>Saccharomyces cerevisiae</i>	76625	10 <sup>2</sup> -10 <sup>3</sup>	inhibited

**• STORE**

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

**• REFERENCES**

1. Green and Gray. 1950. Wallerstein Lab. Commun. 12:43.
2. Green and Gray. 1950. Wallerstein Lab. Commun. 13:357.
3. MacFaddin. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, Md.

**• PACKAGE**

Cat. No : MB-W2287 W.L. Differential Broth	500 G
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