Wurtz Medium

M1065

Wurtz Medium is used as a non-selective medium for isolation and differentiation of lactose-fermenting bacteria.

Composition**

Ingredients	Gms / Litre
Meat peptone	5.000
Beef extract	3.000
Sodium chloride	5.000
Lactose	10.000
Bromo thymol blue	0.075
Agar	15.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 38.08 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

The family *Enterobacteriaceae* consists of a large group of organisms all of which ferment glucose. Those, which ferment lactose, are grouped together as “coliform bacteria”. Pathogenic serotypes of *Escherichia coli* present a particular problem and their isolation has always been a difficult process. Wurtz Medium is a non-selective medium employed for the growth, and the differentiation of *Enterobacteriaceae* from clinical samples, especially when suspected with the presence of pathogenic *E. coli* (1).

The medium contains meat peptone and beef extract, which provide essential growth nutrients. Lactose is the fermentable sugar and bromothymol blue acts as pH indicator. Lactose fermenters form yellow coloured colonies, while the lactose-non-fermenting *Enterobacteriaceae* grows as blue colonies due to the alkalization of the medium.

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium
Green coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 3.81% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
M1065: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response				
Escherichia coli ATCC 25922	50-100	luxuriant	>=70%	yellow
Klebsiella pneumoniae ATCC 13883	50-100	luxuriant	>=70%	yellow

Proteus vulgaris ATCC 13315	50-100	luxuriant	>=70%	blue
Salmonella Typhi ATCC 6539	50-100	luxuriant	>=70%	blue
Salmonella Enteritidis ATCC 13076	50-100	luxuriant	>=70%	blue
Shigella flexneri ATCC 12022	50-100	luxuriant	>=70%	blue

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Corry J. E. L., Curtis G. D. W. and Baird R. M., (Eds.), Culture Media for Food Microbiology, Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam.

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