



## Wilson Blair Agar w/ BG

M332

### Intended Use:

Recommended for isolation and preliminary identification of *Salmonella* Typhi from clinical specimens.

### Composition\*\*

Ingredients	Gms / Litre
Peptone	10.000
HM peptone B #	5.000
Dextrose (Glucose)	5.000
Disodium hydrogen phosphate	4.000
Ferrous sulphate	0.300
Bismuth sulphite indicator	8.000
Brilliant green	0.025
Agar	20.000
Final pH ( at 25°C)	7.7±0.2

\*\*Formula adjusted, standardized to suit performance parameters

# Equivalent to Beef extract

### Directions

Suspend 52.32 grams in 1000 ml distilled water. Heat gently with frequent agitation until the medium is dissolved completely. **DO NOT AUTOCLAVE**. Cool to 45-50°C. Mix well to disperse precipitate and pour thick plates (25 ml medium per plate). Dry the plates before use, avoiding over drying.

### Principle And Interpretation

Wilson and Blair Agar was formulated by Wilson and Blair (1) for isolating *Salmonella* species especially *Salmonella* serotype Typhi from clinical specimens.

Peptone and HM peptone B provide nitrogenous, carbonaceous compounds and other growth nutrients. Brilliant green dye inhibits all gram-positive bacteria. Dextrose (Glucose) is the fermentable carbohydrate. Ferrous sulphate is an indicator of H<sub>2</sub>S production. Bismuth is a heavy metal which is inhibitory to most gram-negative enteric bacilli other than *Salmonella*. Ferrous sulphate is reduced by *Salmonella* species in presence of bismuth sulphite and dextrose to form iron sulphide, indicated by black coloured colonies.

### Type of specimen

Clinical samples - faeces; Food and dairy samples; Water samples.

### Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4,5,6).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(7)

After use, contaminated materials must be sterilized by autoclaving before discarding.

### Warning and Precautions

In Vitro diagnostic Use. For professional use only. Read the label before opening the container. Wear protective gloves/ protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while clinical specimens. Safety handling guidelines may be referred in individual safety data sheets.

### Limitations :

1. Further biochemical and serological tests must be carried out for complete identification.

### Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

## Quality Control

### Appearance

Greenish yellow coloured homogeneous free flowing powder

### Gelling

Firm, comparable with 2.0% agar gel.

### Colour and Clarity of preapred medium

Light yellow coloured clear to slightly opalescent gel.

### Reaction

Reaction of 5.23% w/v aqueous solution at 25°C. pH : 7.7±0.2

### pH

7.50-7.90

### Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922 (00013*)	≥10 <sup>4</sup>	inhibited	0%	
<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	≥50%	green
<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	≥50%	black with sheen
<i>Salmonella</i> Typhimurium ATCC 14028 (00031*)	50-100	luxuriant	≥50%	black with sheen

Key : (\*) Corresponding WDCM numbers.

## Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

## Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

## Reference

1. Wilson and Blair, 1929, J. Pathol. Bacteriol., 29 : 310.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
6. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
7. Lipps WC, Braun-Howland EB, Baxter TE, eds. Standard methods for the Examination of Water and Wastewater, 24th ed. Washington DC:APHA Press; 2023.

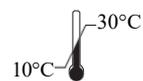
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