



Wilson Blair Agar w/BG

M332

Wilson Blair Agar with Brilliant Green is recommended for the isolation and preliminary identification of *Salmonella* Typhi from clinical specimens.

Composition**

Ingredients	Gms / Litre
Beef extract	5.000
Peptic digest of animal tissue	10.000
Dextrose	5.000
Disodium 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

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 50-55°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.

Peptic digest of animal tissue and beef extract provide nitrogenous, carbonaceous compounds and other growth nutrients. Brilliant green dye inhibits all gram-positive bacteria. Dextrose is the fermentable carbohydrate. Ferrous sulphate is an indicator of H₂S 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.

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

M332: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response <i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited	0%	

<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	>=50%	green
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant	>=50%	black with sheen
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	>=50%	black with sheen

Storage and Shelf Life

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

Reference

- 1.Wilson and Blair, 1929, J. Pathol. Bacteriol., 29 : 310.
- 2.MacFaddin J., 1985, Media for the Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.

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