

Technical Information

Wilson Blair Agar w/BG

Product Code: DM 1332

Application: - 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

Principle & Interpretation

Wilson and Blair Agar was first 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 the growth of 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.

Methodology

Suspend 52.32 grams of powder media in 1000 ml distilled water. Shake well & 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.

Quality Control

Physical Appearance

Greenish yellow coloured homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared 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 range

7.50-7.90

Cultural Response/Characteristics

DM 1332: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Recover	Colour of colony
<i>Escherichia coli</i> ATCC 25922	$\geq 10^3$	inhibited	0%	
<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	$\geq 50\%$	green
<i>Salmonella Typhi</i> ATCC 6539	50-100	luxuriant	$\geq 50\%$	black with sheen
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	$\geq 50\%$	black with sheen

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

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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