



## Brilliant Green Agar with 1.2% Agar

M016A

### Intended use

Brilliant Green Agar w/1.2% Agar is used as an enrichment medium for isolation of Salmonellae from faeces, urine and other pathological samples.

### Composition\*\*

| Ingredients         | Gms / Litre |
|---------------------|-------------|
| Proteose peptone    | 10.000      |
| Yeast extract       | 3.000       |
| Lactose             | 10.000      |
| Sucrose             | 10.000      |
| Sodium chloride     | 5.000       |
| Phenol red          | 0.080       |
| Brilliant green     | 0.0125      |
| Agar                | 12.000      |
| Final pH ( at 25°C) | 6.9±0.2     |

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

### Directions

Suspend 25 grams in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING. For more selectivity, aseptically add rehydrated contents of one vial of Sulpha Supplement (FD068). Mix well before pouring into sterile Petri plates.

### Principle And Interpretation

*Salmonella* species cause many types of infections, from mild self-limiting gastroenteritis to life threatening typhoid fever.

The most common form of Salmonella disease is self-limiting gastroenteritis with fever lasting less than 2 days and diarrhoea lasting less than 7 days (7).

Brilliant Green Agar as a primary plating medium for isolation of *Salmonella* species was first described by Kristensen et al (1) and further modified by Kauffmann (2) and recommended by APHA (3, 4) FDA (5) and USP (6).

These media contain brilliant green which inhibits growth of majority of gram-negative and gram-positive bacteria. *Salmonella* Typhi, *Shigella* species, *Escherichia coli*, *Proteus* species, *Pseudomonas* species *Staphylococcus aureus* are mostly inhibited. Clinical specimens can be directly plated on this medium. However, being highly selective, it is recommended that this medium should be used along with a less inhibitory medium to increase the chances of recovery. Often cultures enriched in Selenite (M025A) or Tetrathionate Broth (M032) are plated on Brilliant Green Agar as well as Bismuth Sulphite Agar (M027), SS Agar (M108) and MacConkey Agar (M081). Phenol red serves as an acid base indicator giving yellow colour to lactose and or sucrose fermenting bacteria. Lactose non-fermenting bacteria develop white to pinkish red colonies within 18 - 24 hours of incubation. *Salmonella* Typhi and *Shigella* species may not grow on this medium, moreover *Proteus*, *Pseudomonas* and *Citrobacter* species may mimic enteric pathogens by producing small red colonies.

### Type of specimen

Clinical samples - Urine and pathological samples ; Water samples

### Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(3)

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

### Warning and Precautions :

In Vitro diagnostic 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 handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

### Limitations :

## 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

Beige to light pink coloured homogeneous free flowing powder

#### Gelling

Firm, comparable with 1.2% agar gel.

#### Colour and Clarity of prepared medium

Greenish brown coloured clear to slightly opalescent gel forms in Petri plates

#### Reaction

Reaction of 5.0% w/v aqueous solution at 25°C. pH : 6.9±0.2

#### Cultural Response

| Organism  | Inoculum (CFU)   | Growth         | Lot value (CFU) | Recovery | Colour of Colony |
|---|------------------|----------------|-----------------|----------|------------------|
| <b>Cultural Response</b>                          |                  |                |                 |          |                  |
| <i>Salmonella Typhimurium</i> ATCC 14028 (00031*) | 50 -100          | good-luxuriant | 25 -100         | ≥50 %    | pinkish white    |
| <i>Salmonella Abony NCTC 6017</i> (00029*)        | 50 -100          | good-luxuriant | 25 -100         | ≥50 %    | pinkish white    |
| <i>Salmonella Enteritidis</i> ATCC 13076 (00030*) | 50 -100          | luxuriant      | 25 -100         | ≥50 %    | pinkish white    |
| <i>Salmonella Typhi</i> ATCC 6539                 | 50 -100          | fair-good      | 15 -40          | 30 -40 % | reddish pink     |
| <i>Escherichia coli</i> ATCC 25922 (00013*)       | 50 -100          | none-poor      | 0 -10           | 0 -10 %  | yellowish green  |
| <i>Escherichia coli</i> ATCC 8739 (00012*)        | 50 -100          | none-poor      | 0 -10           | 0 -10 %  | yellowish green  |
| <i>Escherichia coli</i> NCTC 9002                 | 50 -100          | none-poor      | 0 -10           | 0 -10 %  | yellowish green  |
| <i>Staphylococcus aureus</i> ATCC 25923 (00034*)  | ≥10 <sup>3</sup> | inhibited      | 0               | 0%       |                  |
| <i>Staphylococcus aureus</i> ATCC 6538 (00032*)   | ≥10 <sup>3</sup> | inhibited      | 0               | 0%       |                  |

Key : \*Corresponding WDCM numbers.

### Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°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. Use before expiry date on the label.

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 (4,5).

### References :

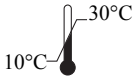
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In vitro diagnostic medical device



CE Marking



Storage temperature

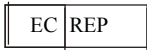


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