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| B1802 | BRILLIANT GREEN, PHENOL RED, LACTOSE, SUCROSE AGAR | | | |
| Formula | | | | |
| Ingredients : | gms/lit. | | | |
| Peptone | 10.00 | | | |
| Yeast extract | 3.00 | | | |
| Lactose monohydrate | 10.00 | | | |
| Sucrose | 10.00 | | | |
| Sodium chloride | 5.00 | | | |
| Phenol red | 0.080 | | | |
| Brilliant green | 0.0125 | | | |
| Agar | 20.00 | | | |
| Final pH (at 25°C) : 6.9 ± 0.2 | | | | |
| Directions : | | | | |
| Suspend 57.59 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15lbs pressure (121°C) for 15 minutes or as per validated cycle. Cool to 45-50°C. Mix well before pouring into sterile Petri plates. | | | | |
| Principle : | | | | |
| The composition of medium is as per European Pharmacopoeia and is cited as Agar medium L. It can also be used for food samples and clinical samples. Brilliant Green, Phenol Red, Lactose, Sucrose Agar is used as a primary plating medium for isolation of <i>Salmonella</i> species was first described by Kristensen et al as medium for differentiation of paratyphoid B from other Gram-negative enteric bacteria. It was further modified by Kauffmann for isolation of <i>Salmonella</i> from stool samples. Brilliant green agar is also recommended by APHA, FDA. This medium is employed in testing clinical specimens. Heavy inocula and heavily contaminated samples can be analyzed due to the outstanding selectivity of this medium. Peptone and yeast extract supplies essential amino acids and long chains of peptides for enhanced growth. Sodium chloride maintains the osmotic equilibrium. Lactose monohydrate and sucrose are the fermentable carbohydrate sources. Phenol red serves as an acid base indicator giving yellow colour to lactose and or sucrose fermenting bacteria. This medium also contains brilliant green, which inhibits growth of majority of Gram-negative and Gram-positive bacteria. <i>Salmonella</i> Typhi, <i>Shigella</i> species, <i>Escherichia coli</i> , <i>Proteus</i> species, <i>Pseudomonas</i> species, and <i>Staphylococcus aureus</i> are mostly inhibited. 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 or Tetrathionate Broth are plated on Brilliant Green Agar along with Bismuth Sulphite Agar, SS Agar & MacConkey Agar. Non-lactose fermenting bacteria develop white to pinkish red colonies within 18-24 hours of incubation. <i>Salmonella</i> Typhi and <i>Shigella</i> species may not grow on this medium, moreover <i>Proteus</i> , <i>Pseudomonas</i> and <i>Citrobacter</i> species may mimic enteric pathogens by producing small red colonies. | | | | |
| QC Tests - (I)Dehydrated Medium | | | | |
| | Colour : | Light yellow to light pink | | |
| | Appearance : | Homogeneous Free Flowing powder | | |
| (II)Rehydrated medium | | | | |
| | pH (post autoclaving/heating) : | 6.9± 0.2 | | |
| | Colour (post autoclaving/heating) : | Greenish brown | | |
| | Clarity (post autoclaving/heating) : | Clear to slightly opalescent | | |
| (III)Q.C. Test Microbiological | | | | |
| Cultural characteristics observed after 24 - 48 hrs at 30-35° C. Recovery rate is considered as 100% for bacterial growth on Soyabean casein digest agar. | | | | |
| | MICROORGANISM (ATCC) | GROWTH | Recovery | COLOUR OF COLONY |
| | <i>Salmonella typhimurium</i> (14028) | Good-Luxuriant | ≥ 50% | Pinkish white |
| | <i>Salmonella abony</i> (NCTC 6017) | Good-Luxuriant | ≥ 50% | Pinkish white |
| | <i>Salmonella enteritidis</i> (13076) | Luxuriant | ≥ 50% | Pinkish white |
| | <i>Salmonella typhi</i> (6539) | Fair- good | 30-40% | Reddish pink |
| | <i>Escherichia coli</i> (25922) | None-poor | 0-10% | Yellowish green |
| | <i>Escherichia coli</i> (8739) | None-poor | 0-10% | Yellowish green |
| | <i>Escherichia coli</i> (NCTC 9002) | None-poor | 0-10% | Yellowish green |
| | <i>Staphylococcus aureus</i> (25923) | Inhibited | 0% | -- |
| | <i>Staphylococcus aureus</i> (6538) | Inhibited | 0% | -- |

TECHNICAL SHEET

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| Precautions : | 1. For Laboratory Use. 2. Follow proper, established laboratory procedures in handling and disposing of infectious materials. | | | | |
| Limitations : | 1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium. Salmonella typhi & Shigella spp. may not grow on this medium, moreover Proteus, Pseudomonas & Citrobacter species may mimic enteric pathogens by producing small red colonies. | | | | |
| Use : | Used for selective isolation of Salmonellae other than Salmonella typhi from foods, dairy products etc in accordance with European pharmacopeia. | | | | |
| Storage : | Dehydrated medium: below 30°C. prepared medium: 2-8°C | | | | |
| Packing : | 500 gm. bottle | | | | |
| Product profile: | Reconstitution | Quantity on Preparation (500g) | pH (25°C) | Supplement | Sterilization |
| B1802 | 57.59g/l | 8.68L | 6.9 ± 0.2 | Nil | 121 ⁰ C / 15 minutes |

Disclaimer:

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related BIOMARKLABORATORIES publications.

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