PRODUCT SPECIFICATION SHEET

Brilliant Green Agar Base w/ 1.2% Agar (DM043)

Intended Use
Brilliant Green Agar Base w/ 1.2% Agar (DM043) is recommended for enrichment and isolation of *Salmonellae* from faeces, urine and other pathological specimen.

Product Summary and Explanation
Brilliant Green Agar Modified is recommended for the isolation[1] of *Salmonella*, other than *Salmonella typhi*, from water and associated materials[2] and meat and meat products.[3] *Salmonella* species are responsible for 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 diarrhoea lasting less than 7 days and fever lasting less than 2 days.[4] Kristensen et al[5] first described Brilliant Green Agar as a primary plating medium for isolation of Salmonella species and was further modified by Kauffmann[6] and recommended by APHA[7,8] FDA[9] and USP.[10] The presence of brilliant green in this medium helps to inhibit 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, it is recommended that this medium should be used alongwith a less inhibitory medium to increase the chances of recovery, as the medium is highly selective. Often cultures enriched in Tetrathionate Broth (DM353) are plated on this medium as well as Bismuth Sulphite Agar (DM039), SS Agar (DM236) and MacConkey Agar (DM143).

Principles of the Procedure
Brilliant Green Agar Base w/ 1.2% Agar contains beef extract and peptone as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Lactose and sucrose are carbohydrate sources. Phenol red serves as an acid base indicator giving yellowish green colour to lactose and or sucrose fermenting bacteria, while *Salmonella* produces red colonies. Lactose non-fermenting bacteria develop white to pinkish colonies within 18 - 24 hours of incubation. This medium also contains brilliant green, which inhibits growth of majority of Gram-negative and Gram-positive, bacteria, except *Salmonella*.

Formula / Liter

Ingredients	Gms / Liter
Proteose peptone	10.00
Yeast extract	3.00
Lactose	10.00
Sucrose	10.00
Sodium chloride	5.00
Phenol red	0.08
Brilliant green	0.0125
Agar	12.00
Final pH: 6.9 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

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Directions

1. Suspend 50.09 grams of the medium in one liter of distilled water.
2. Heat if necessary, to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. AVOID OVERHEATING.
5. For more selectivity, Cool to 50°C aseptically add rehydrated contents of one vial of Sulphamandelate Supplement (MS042).
6. Mix well and pour into sterile petri plates.

Quality Control Specifications

Dehydrated Appearance	Light yellow to light pink coloured homogeneous free flowing powder
Prepared Medium	Greenish brown coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 5.09% Solution	pH : 6.9 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.2% Agar gel

Expected Cultural Response: Cultural response was carried out after an incubation at 30-35°C for 24-48 hours. Recovery rate is considered as 100% for bacteria growth on Soyabean Casein Digest Agar (DM247).

Sr. No.	Organisms	Results to be achieved				
		Inoculum (CFU)	Growth	Lot value (CFU)	Recovery	Colour of colony
1.	*Salmonella yphimurium ATCC 14028*	50 -100	good-luxuriant	25-100	>=50 %	pinkish white
2.	*Salmonella abony NCTC 6017*	50 -100	good-luxuriant	25-100	>=50 %	pinkish white
3.	*Salmonella enteritidis ATCC 13076*	50 -100	good-luxuriant	25-100	>=50 %	pinkish white
4.	*Salmonella typhi ATCC 6539*	50 -100	fair-good	15-40	30-40 %	reddish pink
5.	*Escherichia coli ATCC 25922*	50 -100	none-poor	00-10	0-10 %	yellowish green
6.	*Escherichia coli ATCC 8739*	50 -100	none-poor	00-10	0-10 %	yellowish green
7.	*Escherichia coli NCTC 9002*	50 -100	none-poor	00-10	0-10 %	yellowish green
8.	*Staphylococcus aureus ATCC 25923*	>=10^3	inhibited	0	0%	--
9.	*Staphylococcus aureus ATCC 6538*	>=10^3	inhibited	0	0%	--

The organisms listed are the minimum that should be used for quality control testing.

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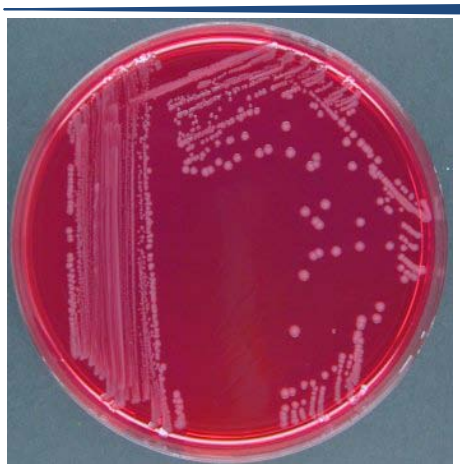

Salmonella Typhimurium ATCC 14028

Escherichia coli ATCC 25922

Test Procedure
Refer to appropriate references for specific procedures for isolation of *Salmonellae* from faeces, urine and other pathological specimen.

Results
Refer to appropriate references and specific procedures for interpretation of the results.

Storage
Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. Organisms other than *Salmonella* spp., such as *Morganella morgani* and some *Enterobacteriaceae,* may grow on the medium.
2. Confirmatory tests, such as fermentation reactions and seroagglutination, should be carried out on all presumptive *Salmonella* spp.

Packaging
Product Name : Brilliant Green Agar Base w/ 1.2% Agar
Product Code : DM043
Available Pack sizes : 100gm / 500gm

References

1. Heard, Jennet and Linton. 1969. Br. Vet. J. *125*:635.
2. H. M. S. O. 1982. Methods for the isolation and identification of salmonellae (other than *Salmonella typhi*) from water and associated materials.

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6. Kauffman F., 1935, Seit F. Hyg., 177:26.
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8. Marshall R. (Ed.), 1992, Standard Methods for the Microbiological Examination of Dairy Products, 16th ed., APHA, Washington, D.C.
9. Bacteriological Analytical Manual, 1978, 5th ed, AOAC, Washington D.C.
10. The United States Pharmacopoeia, 1985, 21st Rev., USP Convention, Rockville MD.

Further Information

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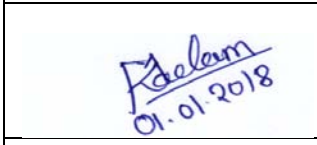	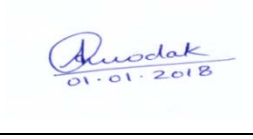	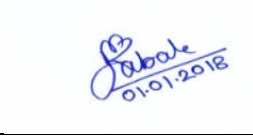
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