BRILLIANT GREEN AGAR w/ and w/o NOVOBIOCIN

INTENDED USE
Remel Brilliant Green Agar w/ and w/o Novobiocin is recommended for use in qualitative procedures for selective and differential isolation of *Salmonella* species other than *Salmonella enterica* serovars Typhi and Paratyphi from food products or other materials.

SUMMARY AND EXPLANATION
Brilliant Green Agar was developed by Kristensen et al. for isolation of *Salmonella*.[1] Moats added novobiocin to the medium to inhibit growth of *Proteus* in cultures from beef and poultry products.[2] Devenish and Cooke, in separate studies, also added novobiocin to Brilliant Green Agar to further improve selectivity.[3,4] This medium is recommended by the American Public Health Association (APHA) for the recovery of *Salmonella* from food products.[5]

PRINCIPLE
Casein and meat peptones provide nitrogen, amino acids, and peptides necessary for bacterial growth. Yeast extract is a source of B-complex vitamins. Sodium chloride is a source of essential electrolytes and maintains osmotic equilibrium. Brilliant green dye is a selective agent which inhibits gram-positive bacteria and most gram-negative bacilli. Novobiocin suppresses the growth of *Proteus* and, to a lesser extent, *Escherichia coli*, *Citrobacter*, and *Pseudomonas*. *Shigella* species grow poorly or not at all on this medium. *Salmonella* colonies range from reddish or pink to nearly white in color with a red zone. Lactose or sucrose fermenting colonies that may occasionally grow on this medium will be yellow-green in color surrounded by a yellow-green zone.

REAGENTS (CLASSICAL FORMULA)*

Lactose	10.0 g	Yeast Extract	3.0 g
Sucrose	10.0 g	Phenol Red	0.08 g
Casein Peptone	5.0 g	Brilliant Green	0.0125 g
Meat Peptone	5.0 g	Agar	20.0 g
Sodium Chloride	5.0 g	Demineralized Water	1000.0 ml

pH 6.9 ± 0.2 @ 25°C

The following optional ingredient is available per liter of medium:
Novobiocin ..... 20.0 mg

*Adjusted as required to meet performance standards.

PRECAUTIONS
This product is For Laboratory Use only. It is not intended for use in the diagnosis of disease or other conditions.

PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 58 g of medium in 1000 ml of demineralized water.
2. Heat to boiling with agitation to completely dissolve.
3. Sterilize by autoclaving at 121°C for 15 minutes or following established laboratory procedures.
4. Mix thoroughly and dispense into appropriate containers.

PROCEDURE
1. Consult current editions of appropriate references for the recommended procedure for sample preparation, inoculation, and testing.[5]

QUALITY CONTROL
Each lot number of the Brilliant Green Agar w/ and w/o Novobiocin has been manufactured, packaged, and processed in accordance with current Good Manufacturing Practice regulations. All lot numbers have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures.

CONTROL	INCUBATION	RESULTS
Brilliant Green Agar:		
Salmonella enterica serovar Typhimurium ATCC® 14028	Aerobic, 18-24h @ 33-37°C	Pink colonies w/ pink zone
Escherichia coli ATCC® 25922	Aerobic, 18-24h @ 33-37°C	Inhibition (partial to complete)
Staphylococcus aureus ATCC® 25923	Aerobic, 18-24h @ 33-37°C	No growth
Brilliant Green Agar w/ Novobiocin:		
Salmonella enterica serovar Typhimurium ATCC® 14028	Aerobic, 18-24h @ 33-37°C	Pink colonies w/ pink zone
Proteus mirabilis ATCC® 12453	Aerobic, 18-24h @ 33-37°C	No growth

LIMITATIONS
1. This medium is not recommended for isolation of *Shigella* spp.[6]
2. Studies have shown slow-lactose fermenters such as *Proteus, Citrobacter,* and *Pseudomonas* may grow on this medium and produce colonies similar in appearance to *Salmonella*.[6]

(Continued on back)

BIBLIOGRAPHY

1. Kristensen, M., V. Lester, and A. Jurgens. 1925. British J. Exp. Path. 6:291-299.
2. Moats, W.A. 1978. Appl. Microbiol. 36:747-751.
3. Devenish, J.A., B.W. Ciebin, and M.H. Brodsky. 1986. Appl. Microbiol. 52:539-545.
4. Cooke, V.M., R.J. Miles, R.G. Price, and A.C. Richardson. 1999. Appl. Microbiol. 65:807-812.
5. Downes, F.P. and K. Ito. 2001. Compendium of Methods for the Microbiological Examination of Foods. 4th ed. APHA, Washington, D.C.
6. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Vol. 1. Williams & Wilkins, Baltimore, MD

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

IFU 110113, Revised March 1, 2021 Printed in U.S.A.

remel

12076 Santa Fe Trail Drive, Lenexa, KS 66215, USA
General Information: (800) 255-6730 Website: www.thermofisher.com Email: csemail@thermofisher.com
Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128