BRILLIANT GREEN SULFA AGAR

INTENDED USE
Remel Brilliant Green Sulfa Agar is recommended for use in qualitative procedures for selective and differential isolation of *Salmonella* species other than *Salmonella enterica* serovars Typhi and Paratyphi from foods, eggs, meat products, or other materials.

SUMMARY AND EXPLANATION
Brilliant Green Agar was developed by Kristensen et al. for isolation of *Salmonella*.[1] Osborne and Stokes modified the formula of Kristensen by addition of sodium sulfapyridine to enhance the selectivity of the medium and improve the recovery of *Salmonella* from egg products.[2] Brilliant Green Sulfa Agar is recommended by the American Public Health Association (APHA) and the U.S. Department of Agriculture (USDA) to isolate *Salmonella* from foods, eggs, and meat products.[3,4]

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. *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 fermenters that may occasionally grow on this medium will appear as yellow-green colonies surrounded by a yellow-green zone.

REAGENTS (CLASSICAL FORMULA)*

Lactose	10.0	g	Yeast Extract	3.0	g
Sucrose	10.0	g	Sodium Sulfapyridine	1.0	g
Casein Peptone	5.0	g	Phenol Red	0.08	g
Meat Peptone	5.0	g	Brilliant Green	0.0125	g
Sodium Chloride	5.0	g	Agar	20.0	g
			Demineralized Water	1000.0	ml

pH 6.9 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PREPARATION OF DEHYDRATED CULTURE MEDIUM
1. Suspend 59 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. Do not sterilize longer than 15 minutes. Prolonged heating will decrease the selectivity of the medium.[5]
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.[3,4]

QUALITY CONTROL
Each lot number of the Brilliant Green Sulfa Agar 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
Salmonella enterica serovar Typhimurium ATCC® 14028	Aerobic, 18-24 h @ 33-37°C	Pink-white colonies
Enterococcus faecalis ATCC® 29212	Aerobic, 18-24 h @ 33-37°C	Inhibition (partial to complete)
Escherichia coli ATCC® 25922	Aerobic, 18-24 h @ 33-37°C	Inhibition, green colonies

LIMITATIONS
1. 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*.[5]

BIBLIOGRAPHY

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4. United States Department of Agriculture. 2009. Microbiology Laboratory Guidebook. Retrieved November 03, 2009 from http://origin-www.fsis.usda.gov/PDF/MLG_4_04.pdf.
5. 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.

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