Brilliant-green Bile Broth 2%, BGBB | AS-1152

To identify *coliform* organisms in foods, dairy products, water and wastewater.

For selectively confirming the presence of *coliform* bacteria in water, wastewater, food, and dairy products, Brilliant Green Bile Broth 2% (BGBB) is utilized. After a test for suspected *coliform*, BGBB distinguishes and verifies the existence of these microorganisms. Key ingredients that determine its selectivity are lactose, a fermentable sugar that *coliforms* needed to produce gas, peptone, a source of vital nutrients, brilliant green, and ox bile. The last two function as selective agents, inhibiting the majority of Gram-positive and many Gram-negative bacteria. This avoids misleading bacteria like the lactose-fermenting anaerobe *Clostridium perfringens* from causing false positive results. The generation of gas in BGBB, which is usually detected at 30°C or 37°C because of lactose fermentation, verifies the presence of *coliforms*, which are an essential sign of possible fecal contamination and deteriorated food or water quality.

BGBB is suggested by APHA and ISO standards for *coliform* confirmation.

Composition (gr/L)

Peptone	10
Ox gall	20
Lactose	20
Brilliant Green	0.0133
Final pH at 25°C	7.2 ± 0.2

Preparation

Dissolve 40 g of the powder into 1 L distilled water. Mix well. Fill into tubes containing inverted Durham tube. Autoclave for 15 minutes at 121°C. Cool the medium as quickly as possible.

Quality Control

Dehydrated Appearance: Beige to greenish-beige, free-flowing, homogeneous.
Prepared Appearance: Emerald green, clear with no precipitate.
Reaction of 4.0% Solution at 25°C: pH 7.2 ± 0.2

Microbial Test Results

Incubate for 18–48 hours, or at 35 ± 2°C.

Organism (ATCC)	Recovery	Gas
Escherichia coli (25922)	Moderate to heavy growth	+
Enterobacter aerogenes (13048)	Moderate to heavy growth	+
Enterococcus faecalis (19433)	Inhibition (partial to complete)	-
Staphylococcus aureus (25923)	Inhibition (complete)	no change

Storage

Keep the container at 15-30 °C and prepared medium at 2-8 °C.