

Fluorocult® Brilliant Green 2 %-Bile (BRILA) Broth

Mode of Action

Bile and brilliant green almost completely inhibit the growth of undesired microbial flora, in particular GRAM-positive microorganisms. *E. coli* shows a positive fluorescence under UV light (366 nm). A positive indole reaction and, if necessary gas formation due to fermenting lactose, confirm the findings.

Typical Composition (g/litre)

Peptone 10.0; lactose 10.0; ox bile, dried 20.0; brilliant green 0.0133; L-tryptophan 1.0; 4-methylumbelliferyl- β -D-glucuronide 0.1.

Preparation

Suspend 41 g/litre, fill in test tubes, if necessary, fitted with DURHAM tubes; autoclave (15 min at 121 °C), not longer!

pH: 7.2 $\pm$ 0.2 at 25 °C.

The prepared broth is clear and green.

Experimental Procedure and Evaluation

The usual procedure is followed. The test tubes are inoculated correctly. For 1 ml of inoculum use at least 10 ml of broth. Incubate 24-48 hours at 35 °C aerobically, *E. coli* also at 44 °C.

Check the tubes under UV light (ca. 366 nm), e.g. using UV lamp: light blue fluorescence indicates the presence of *E. coli* in the culture. If fluorescence is negative after 24 hours of incubation do not add KOVACS reagent to check indole reaction (this alcoholic reagent destroys the growth conditions in the medium). Continue incubation for another 24 hours. Then check for fluorescence and indole reaction.

To confirm detection, cover the culture with a 5 mm layer of KOVACS indole reagent. If after 1-2 minutes a red ring shows up, the presence of *E. coli* is confirmed. Gas formation in the DURHAM tube signifies that the culture contains *E. coli* and/or other coliform organisms.

Ordering Information

Product	Merck Cat. No.	Pack size
Fluorocult® Brilliant Green 2%-Bile (BRILA) Broth	1.12587.0500	500 g
Bactident® Indole (dropper bottle)	1.11350.0001	1 x 30 ml
KOVÁCS Indole Reagent	1.09293.0100	100 ml
UV Lamp (366 nm)	1.13203.0001	1 ea

Quality control

Test strains	Growth		Gas formation		MUG	Indole
	at 35 °C	at 44 °C	at 35 °C	at 44 °C		
<i>Escherichia coli</i> ATCC 25922	+	+	+	+	+	+
<i>Escherichia coli</i> ATCC 11775	+	+	+	+	+	+
<i>Citrobacter freundii</i> ATCC 8090	+		+ / -		-	-
<i>Staphylococcus aureus</i> ATCC 6538-P	-		-			
<i>Micrococcus luteus</i> ATCC 10240	-		-			
<i>Bacillus cereus</i> ATCC 11778	-		-			
<i>Lactobacillus plantarum</i> ATCC 8014	-		-			