

Fluorocult® MacCONKEY Agar

Mode of Action

The culture medium serves to isolate *Salmonella*, *Shigella* and coliform bacteria, in particular *Escherichia coli*, from various materials. The bile salts and crystal violet largely inhibit the growth of Gram-positive microbial flora. Lactose together with the pH indicator neutral red are used to detect lactose-positive colonies and *E. coli* can be seen among these because of fluorescence under UV light.

Typical Composition (g/litre)

Peptone from casein 17.0; peptone from meat 3.0; sodium chloride 5.0; lactose 10.0; bile salt mixture 1.5; neutral red 0.03; crystal violet 0.001; agar-agar 13.5; 4-methylumbelliferyl- β -D-glucuronide 0.1.

Preparation

Suspend 50.1 g/litre, autoclave (15 min at 121 °C) pour plates. pH: 7.1 \pm 0.2 at 25 °C.

The plates are clear and red to red-brown.

Experimental Procedure and Evaluation

Inoculate plates in the usual way and incubate for 18 to 24 hours at 35 °C aerobically.

Lactose-negative colonies are colourless. Lactose-positive colonies are red and often surrounded by a turbid zone due to the precipitation of bile acids.

Inspect the culture with UV light: light blue fluorescence denotes *E. coli*.

Ordering Information

| Product | Merck Cat. No. | Pack size |
|----------------------------|----------------|-----------|
| Fluorocult® MacCONKEY Agar | 1.04029.0500 | 500 g |
| UV Lamp (366 nm) | 1.13203.0001 | 1 ea |

Quality control

| Test strains | Growth | Colour of | | Precipitate | MUG |
|--|------------------|------------|-----------|-------------|-----|
| | | colony | medium | | |
| <i>Escherichia coli</i> ATCC 11775 | good / very good | red | red | + | |
| <i>Escherichia coli</i> ATCC 25922 | good / very good | red | red | + | + |
| <i>Salmonella typhimurium</i> ATCC 13311 | good / very good | colourless | yellowish | - | |
| <i>Salmonella dublin</i> ATCC 15480 | good / very good | colourless | yellowish | - | |
| <i>Shigella sonnei</i> ATCC 11060 | good / very good | colourless | yellowish | - | |
| <i>Proteus mirabilis</i> ATCC 29906 | good / very good | colourless | yellowish | - | |
| <i>Bacillus cereus</i> ATCC 11778 | none | | | | |
| <i>Staphylococcus aureus</i> ATCC 6538 | none | | | | |
| <i>Enterococcus hirae</i> ATCC 8043 | none | | | | |