## MFC Broth

**Catalog : HB0154-3**

*MFC Broth is used for the detection of fecal coliforms in drinking water and water source.*

## Approximate Formula:

| Ingredients | gm/liter |
|---|---|
| Proteose peptone | 5.0 |
| Tryptose | 10.0 |
| Lactose | 12.5 |
| Yeast | 3.0 |
| Bile Salts NO.3 | 1.5 |
| Sodium Chloride | 5.0 |
| Aniline Blue | 0.2 |
| Rosolic Acid | 0.1 |

Final pH7.4±0.1 at 25℃

*Adjusted and/or supplemented as required to meet performance criteria.

## Directions:

Suspend 37.3g of the medium in one liter of deionized or distilled water. Heat to completely dissolved, Cool before dispensing. DO NOT AUTOCLAVE.

## Principle and Interpretation:

MFC Broth contain peptones as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins that stimulate bacterial growth. Lactose is a carbohydrate. Bile Salts No. 3 inhibits growth of gram-positive bacteria. The differential indicator system combines aniline blue and rosolic acid. Colonies of fecal coliforms are blue; non-fecal coliforms and other organisms are gray to cream-colored.

## Appearance:

Dehydrated medium is a free-flowing light grey powder. The prepared medium is a kind of light purple transparent liquid.

## Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

## Storage conditions and Shelf life:

MFC Broth must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

## Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 44.5±1℃ for 24±2 hours.

| Microorganism | Strains Number | Inoculum (CFU) | Growth | Remarks |
|---|---|---|---|---|
| *Salmonella typhimurium* | ATCC 14028 | 10-100 | Luxuriant | Turbid |
| *Enterobacter aerogenes* | ATCC 13048 | 10-100 | Luxuriant | Turbid |
| *Shigella flexneri* | ATCC 12022 | 10-100 | Luxuriant | Turbid |
| *Escherichia coli* | ATCC 25922 | 10-100 | Luxuriant | Turbid, Blue |
| *Staphylococcus Aureus* | ATCC 25923 | 1000-5000 | Inhibited | / |

## References:

1. Geldreich, Huff and Best. 1965. J. Am. Water Works Assoc. 57:208.

2. Eaton, Rice and Baird (ed). 2005. Standard methods for the examination of water and wastewater,21st ed., online. American Public Health Association, Washington, D.C.

3. Horwitz (ed.). 2007. Official methods of analysis of AOAC International, 18th ed., online. AOACInternational. Gaithersburg, Md.



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