

90273 BSM-Broth (Bifidus Selective Medium Broth)

Medium for the selective isolation, identification and enumeration of bifidobacteria like *Bifidobacterium longum* and *Bifidobacterium infantis*. The medium is used for quality control in the manufacture of dairy products.

Bifidobacterium grow very well on it while *Lactobacillus* and *Streptococcus* strains are inhibited. *Bifidobacterium* colonies grow within 24-48 hours (sometimes the growth might need up to three days because of the highly selective conditions). The colonies are violet/brown.

At the industrial level this medium allows an easy and fast quality control of yoghurt made with Bifidus and can be used to control the count of Bifidus bacteria.

Because of the wide use of Bifidus Sigma-Aldrich developed the selective BSM as a standard for quality control.

Cat. No. 90273 BSM broth

Cat. No. 88517 BSM agar

Cat. No. 83055 BSM supplement

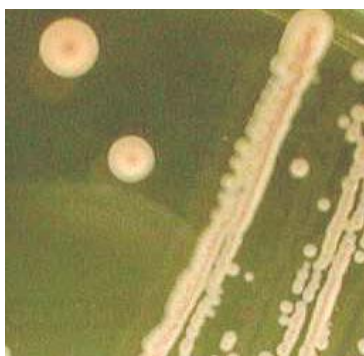


Figure 1:
Colonies of *Bifidus infantis*



Figure 2:
Colonies of *Bifidus longum*

Directions:

Dissolve 42.5g BSM-Broth in 1 litre water.

The final pH should be 6.8 +/- 0.2 at 25°C. without adjusting.

Sterilise by autoclaving at 121°C for 15 min. Cool to 55°C and add 116mg BSM supplement (Cat. No. 83055; freshly suspend in 5 ml sterile water). Mix well.

The prepared medium can be stored at 4°C in the dark for several weeks. Some components are photosensitive.



Principle and Interpretation:

BSM contains Peptone and Meat extract as sources of carbon, nitrogen, vitamins and minerals. Yeast extract supplies B-complex vitamins which stimulate bacterial growth. Dextrose is the carbohydrate source. Sodium chloride maintains the osmotic balance. There is a compound in low concentration for detoxify metabolic by-products. The medium contains reducing and buffering agents. Selective salts inhibit the growth of moulds, enterococci and other Gram-negative bacteria. Another compound inhibits glycolysis by inactivating glyceraldehyde-3-phosphate dehydrogenase present and important in different bacteria and fungi (also *Streptococci* sp.).

Three antibiotics are the selective agents and inhibit the accompanying bacterial flora like *Bacilli*, *Enterobacteriaceae* and *Pseudomonas*.

Bifidobacteria can reduce an azo compound present in the medium, which gives the colonies a pink-purple colouration.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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