

Proliferative action on bifidobacteria by OM-X

Three kinds of bifidobacteria^{*1} were cultured in the medium containing OM-X, and then the growth-stimulating activity of OM-X to bifidobacteria was studied. As a result, OM-X shows the growth-stimulating effect on two out of the three kinds of bifidobacteria.

^{*1} bifidobacterium is a kind of human intestinal bacterium and also is a representative bacterium of good bacteria. For health maintenance, it is important to increase the number of good bacteria, such as bifidobacteria and lactic acid bacteria in the intestine, and to create the intestinal environment with good bacteria dominance.

<Summary>

The study of the growth-stimulating effect of OM-X to bifidobacteria was performed.

Bifidobacterium longum BB536, *Bifidobacterium infantis* M-16V, and *Bifidobacterium breve* M-63 were used as test strains. As a culture medium, MRS semifluid agar medium was prepared with MRS buillon (by MERCK). As a test medium, OM-X was added to the medium to be 1.0% in it, and then it was sterilized by a process of steaming under pressure. Each bifidobacteria was added to respective culture media, and incubated at 37 degree Celsius under an anaerobic condition.

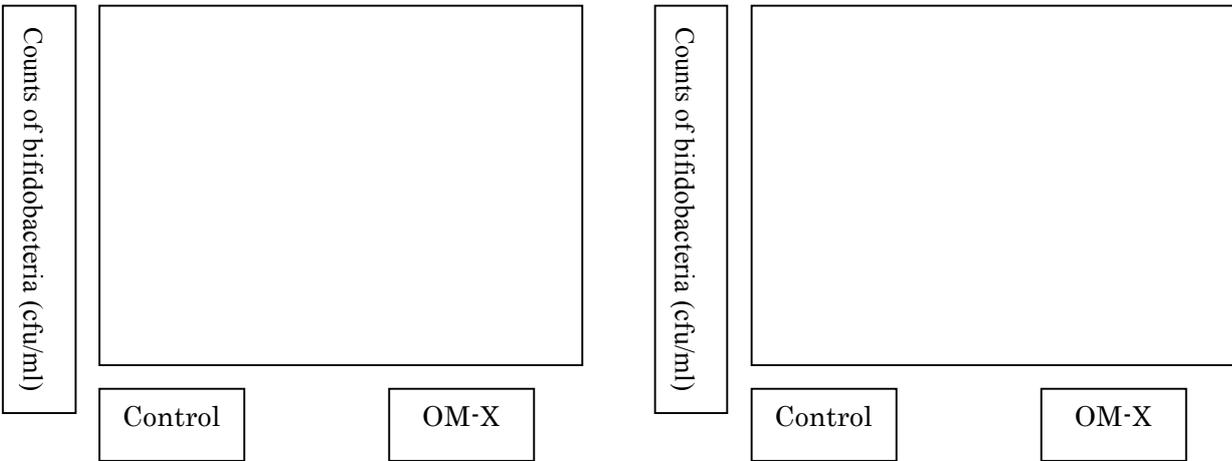
The growth of bifidobacteria was monitored by measuring the optical density (OD) at 660nm using the spectrophotometer. Also, counts of viable bacteria of bifidobacteria were measured by using the TOS propionate agar medium (by Eiken Chemical), and the bacterial growth was evaluated. Moreover, value of the pH in the suspension culture was measured over time and the bacterial growth was confirmed.

As a result, OM-X showed growth-stimulating effect to *B. longum* and *B. breve*, and significant growth-stimulating effect was observed especially to *B. longum*.

On the other hand, OM-X did not show bacterial growth and antiproliferative effect to *B. infantis*.

When growth-stimulating effect on *B. longum* as of 24 hours of cultivation was calculated, the 25 times higher growth-stimulating effect^{*2} was observed. Also, when growth-stimulating effect on *B. breve* as of 24 hours of cultivation was calculated, the 2.5 times higher growth-stimulating effect^{*2} was observed.

^{*2}devised “Counts of viable bacteria in the medium containing OM-X by “Counts of viable bacteria on the control medium”



(Figure1) Comparison of Counts of bifidobacteria as of 24 hours of cultivation