

# Proteolysis Ability

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Proprietary strain of lactic acid bacteria, "TH10" is very unique lactic acid bacteria which shows proteolysis ability 6.25 times higher than that of common strains.

## Objective

To inspect proteolysis ability which is essential for fermentation of OM-X extract, we examined protein degradability using lactic acid bacterial strains isolated from Southeastern Asian fermented foods.

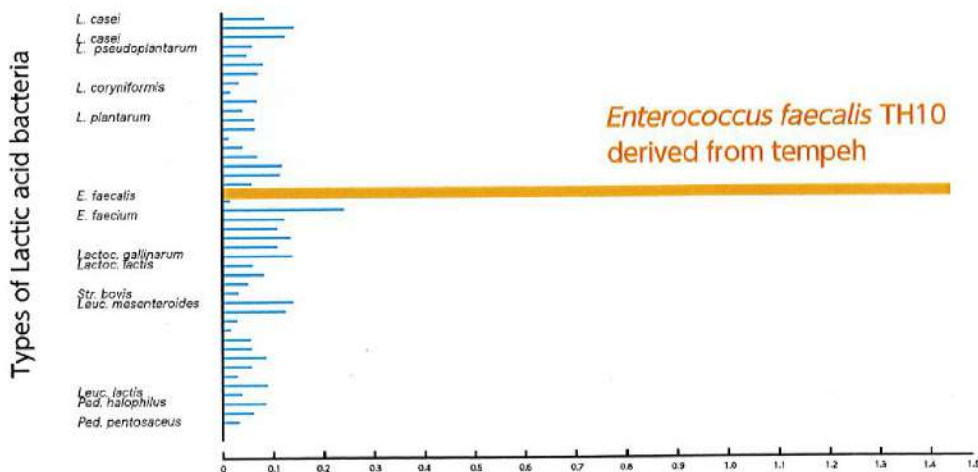
## Methods

We used the colorimetry method for the measurement of the proteolysis ability. We inspected protein degradability using lactic acid bacteria to the nonfat milk nutrient medium which did not contain salt. We disseminated lactic acid bacteria to the nonfat milk nutrient medium which did not contain salt and cultured it for 24 hours. After various treatments, we mixed Folin reagent and measured color development of blue with a spectrophotometer. We assayed quantity of free tyrosine for the index.

## Results

We selected 46 strains out of 189 isolated strains and used them for testing. In the nonfat milk nutrient medium which did not contain salt, the strain that demonstrated the highest proteolysis ability was *Enterococcus faecalis* TH10 isolated from Tempeh and its quantity of free tyrosine was 1.32mg/5ml. All other strains showed 0.01~0.2mg/5ml, and we found that TH10 lactic acid bacteria showed the proteolysis ability 6.25 times higher than others.

Ability comparison of the proteolytic enzymes of each lactic acid bacteria.



Proteolysis ability comparison of various lactic acid bacteria (quantity of free tyrosine mg/5 ml)

Our proprietary strain of lactic acid bacteria, "TH10" which is used for OM-X extract showed 6.25 times higher proteolysis ability than that of common strains.