

# Accumulation of Active Ingredients

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The fermented vegetable extract OM-X (OM-X extract) showed an increment of levels of contained polyphenols and melanoidins proportionally with the prolongation of its fermentation and maturation periods.

## Objective

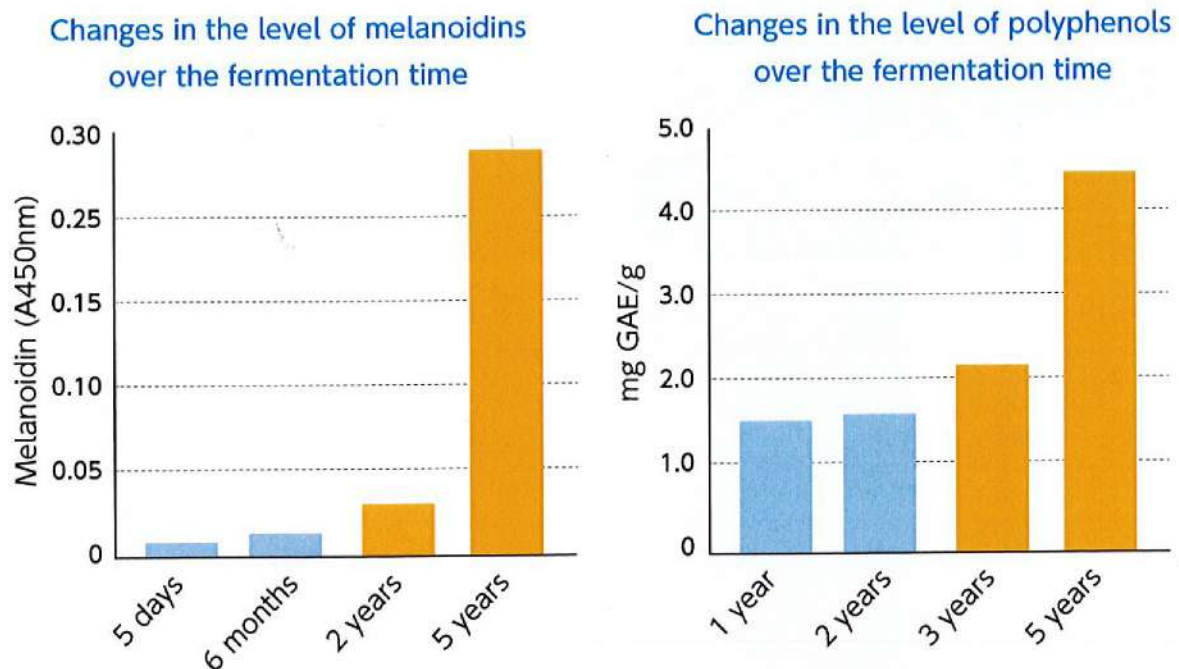
The OM-X extract gains more food functionalities by undergoing fermentation and maturation processes. We examined the level of polyphenols which are known to be a functional ingredient from plants and melanoidins which are known to be a functional ingredient from fermented foods including Miso and Soy sauce.

## Methods

Melanoidins are a functional ingredient that is formed when sugars and amino acids combine through the Maillard reaction. We refined the OM-X extract in order to remain the absorption wavelength in A450nm and measured it with a spectrophotometer. We measured polyphenols with Folin-Denis assay.

## Results

The contained amount of melanoidins in the OM-X extract increased drastically over time, especially an increment level after the second year was prominent. The contained amount of polyphenols also increased drastically over time. These results suggested that the OM-X extract gains more functional ingredients like melanoidins and polyphenols by undergoing a prolonged unheated fermentation process.



The fermented extract OM-X which underwent a prolonged unheated fermentation process gained more contained amount of melanoidins and polyphenols.