

Food science

What we did in Food Science

Day1: Ames test

Day2: Lecture about
free radical and
antioxidant

Day3: Mayonnaise

Day4: Effect of WH30+ on CRF

Mayonnaise
using stabilizer

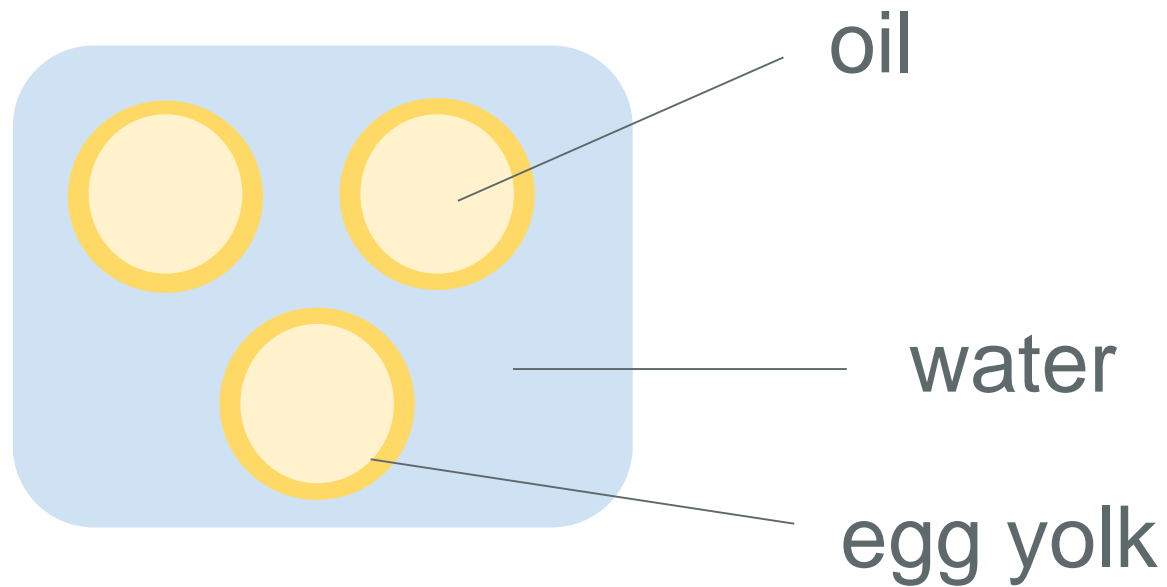
Objectives

To demonstrate the use of emulsifier and stabilizer in the preparation of salad dressing



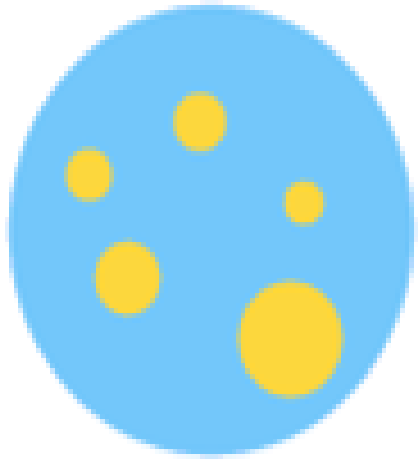
Emulsification

Emulsification is a phenomenon that mixing two elements that never mix in a natural setting.



egg yolk reinforce
contact between
oil and water

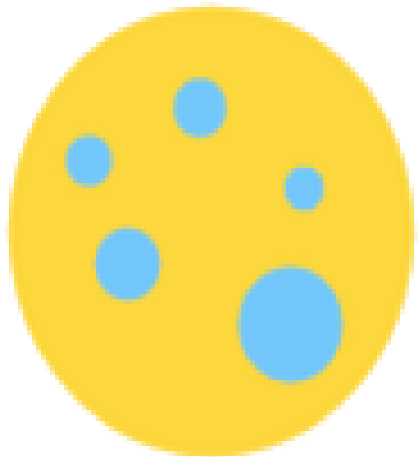
Oil in Water / Water in Oil



O/W (oil in water)



ex) milk, ice cream



W/O (water in oil)



ex) butter, foundation

Method

Make three types of mayonnaise and compare

Add each ingredient to the common ingredients
(sugar, salt, mustard, water, vinegar)

Sample A

egg yolk
stabilizer

Sample B

stabilizer

Sample C

egg yolk

Result

Sample C (egg yolk only) : The oil in mayonnaise separate from other ingredients.

Stabilizer keep mixed state



For commercial products

Stabilizer Stabilizer help to stabilize the emulsion by forming a network and prevent connection of the oil droplets

Commercial mayonnaise uses less oil and more water.



It requires the use of stabilizers.

What we learn in the third week

The basis of experiment and skill

- how to use the equipment
- comparative experiment
- standard curve

The necessity of chemical and molecularly thinking

The variety of aspects in the food science

- the use of food as a medicine
to prevent disease
- the study of principle to make food product