Emulsified Dressings

Description
Students will be introduced to the science of emulsifiers and how they apply to mixing two unmixable ingredients to create a mayonnaise. Students will identify the proper proportions of mayonnaise ingredients and will create a mayonnaise using a whisk. They will also learn how to fix a broken mayonnaise as well as identify food safety issues when making and storing a mayonnaise.

Lesson Objectives
Students will be able to:

• demonstrate the proper method for making a mayonnaise by hand using a whisk
• identify the role of the ingredients needed to make a mayonnaise
• describe how to fix a broken mayonnaise
• show how to safely store mayonnaise for future use, and
• demonstrate correct kitchen safety procedures and techniques.

Assumptions
• Students have received orientation on the subject of kitchen and food safety.
• The teacher will be familiar with correct mayonnaise recipe procedures, using appropriate resources.
• Workstation Set-up and Introductory Knife Skills Activity Plans have been successfully previously completed.
• The teacher will demonstrate the dish to be prepared and all students will have a copy of the recipe.
• The teacher will have the flexibility to choose the recipe based on resources, time, and physical space.

Safety Considerations
Students will practise proper use of personal protective equipment (PPE) at all times.

Oil spills must be cleaned up immediately with an approved cleaner to avoid any slips or falls.
**Terminology**

**acid**: Ingredients with high acid content (pH 0 to 4.0), such as vinegar and citrus juice, do not support the growth of bacteria. Acidic ingredients are typically sour-tasting.

**emulsion**: An emulsion is a mixture of two or more ingredients that do not naturally mix.

**emulsifier**: An emulsifier is an ingredient that is used to stabilize an emulsion; it is an ingredient that enables two normally unmixable ingredients to mix.

**emulsify**: To emulsify is to combine two normally unmixable ingredients to create one solution.

**mayonnaise**: A mayonnaise is a stable emulsion of oil, acid, and an emulsifier used as a condiment or dressing.

**reconstitute**: When the ingredients in a mayonnaise separate (break), reconstituting refers to following a procedure to emulsify the ingredients again.

**season**: To season is to enhance and amplify a food’s flavour in order to maximize the pleasure of the palate.

**yolk**: The yolk is the yellow part of an egg; it acts as the emulsifier in a standard mayonnaise recipe.

**Estimated Time**

2 70-minute classes, depending on the amount of labs chosen for this lesson

**Recommended Number of Students**

Up to 24

**Facilities**

Home Economics teaching lab and/or Culinary Arts teaching kitchen

**Resources**


Demonstrating Skills And Knowledge

Procedure

Day 1

• The teacher will introduce the class to the ingredients, methods, techniques, and science behind the preparation of mayonnaise using desired methods and materials.

• The teacher will demonstrate the mayonnaise recipe. The base mayonnaise may then be served on its own or turned into a secondary dressing such as a ranch, Caesar, or chipotle dressing.

• It is also a good idea for the teacher to purposely break the mayonnaise and demonstrate the process of reconstituting the sauce.

Day 2

• Students will use their recipes and create the mayonnaise demonstrated by the teacher. Students may all make the same dish(es), or the teacher may assign various recipes to different groups.

• As students are cooking, the teacher will observe and assist when necessary.

• As students complete the dish, they will present it to the teacher for both visual and tasting assessment before consuming or packaging their final product.

Evaluation Guidelines

If only teaching the emulsified dressings unit as theory, a summative and/or formative assessment will be conducted using a quiz.

For the lab, students will receive a formative evaluation on:

• positive participation in cooking labs
• observational assessment during the lab, and
• whether the final product meets outlined and demonstrated standards.

Extension Activities

This activity can be adapted in the following ways:

• Discuss international cooking.
• Add to other modules to complete or complement their results.
• Discuss nutritional information.
• Store completed mayonnaise and use as part of a future lab.