

Salad Dressings / Emulsions

Summary

Identify classifications of salad dressings-vinaigrette and mayonnaise based. Most dressings are an emulsion which is a mixture of two liquids that normally don't combine. What is an emulsifier?

Time Frame

1 class periods of 45 minutes each

Group Size

Small Groups

Life Skills

Aesthetics, Thinking & Reasoning, Communication, Employability

Materials

Computer and projector and/or Italian salad dressing bottle, ranch salad dressing bottle, vinegar, oil, seasonings, lemon juice, salt, sugar, ranch dressing packets, milk, cucumbers or other vegetables, 2 clear beakers with lids, food processor, bowl, wire whisk.

Background for Teachers

There are 2 classifications of salad dressings: vinaigrette and mayonnaise based.

Vinaigrette is made with oil and vinegar, usually in a 3:1 ratio

Most salad dressings are emulsions. An emulsion is a mixture of two liquids that normally do not combine.

Vinaigrette is a temporary emulsion, one that quickly separates. That is why it is necessary to shake oil-and-vinegar dressings before using them.

A permanent emulsion is a mix of liquids that will not separate because there is an emulsifier added. An emulsifier is a substance that keeps the oil and vinegar blended. Egg yolk is an effective emulsifier. Mayonnaise is a thick, creamy dressing that is a permanent emulsion of oil, lemon juice, egg yolk and seasonings.

Mayonnaise based dressing uses mayonnaise and seasonings.

Student Prior Knowledge

What is a salad? What is salad dressing? Ingredients: vinegar, lemon juice, salt, sugar, egg yolk seasonings. Equipment: wire whisk, food processor. bowl

Intended Learning Outcomes

Students will be able to identify classifications of salad dressings-vinaigrette and mayonnaise based. Students will be able to define emulsion. Students will be able to identify emulsifiers. Students will be able to prepare a vinaigrette dressing. Students will be able to prepare mayonnaise and a mayonnaise based dressing.

Instructional Procedures

Ask students what their favorite salads are.(make a list) Ask each student that responds "what are the ingredients in that salad".(list those ingredients by the name of the salad. When you have 4-5 salads listed ask the students is there a common ingredient between all these salads? answer is

DRESSING. Tell the students there are 2 classifications of salad dressings. The first is a vinaigrette (show the Italian dressing bottle) The second is a mayonnaise based dressing (show the ranch dressing bottle) Notice that the ingredients are separated in the Italian dressing but not the ranch dressing.(shake the Italian bottle) but when I shake the bottle, I am creating an emulsion. An emulsion is a mixture of two liquids that normally do not combine. The ingredients that don't combine in the Italian dressing is oil and vinegar. Shaking the ingredients creates a temporary emulsion, one that quickly separates. Something that creates an emulsion is called an emulsifier. Shaking is a temporary emulsifier. There are ingredients that are permanent emulsifiers such as mustard or egg yolks. I want you to see a short video on emulsions and emulsifiers and how to make mayonnaise. Show the YouTube video at: <http://www.youtube.com/watch?v=R7sYROUNO7g> Questions? Each group will make: 1. Mayonnaise 2. Ranch dressing from the mayonnaise 3. vinaigrette dressing Option 1. You can have the students put their dressings in a marked container to use on their salad lab. Option 2. You could have cucumbers, tomatoes, carrots, cauliflower, broccoli to eat with the salad dressings

Strategies for Diverse Learners

Gifted: Have gifted students write on the white board, and help demonstrate and clean up demonstration. Struggling student: Show all the ingredients and equipment so students know all vocabulary. Pair struggling students with gifted students in a small group. Assign a struggling student a buddy for extra help.

Extensions

Have students create their own recipe for salad dressing or salad.

Assessment Plan

Bell ringer/Quiz questions: 1. What are the 2 classifications of salad dressings? Answer: vinaigrette and mayonnaise based. 2. What is an emulsion? Answer: mixture of 2 liquids that normally don't mix. 3. Name 2 emulsifiers. Answer: egg yolk, mustard, shaking. 4. What are the ingredients in a vinaigrette dressing? Answer: oil, vinegar, seasonings 5. What is the usual oil to vinegar ratio in a vinaigrette dressing? Answer: 3:1 Lab assessment See attached rubric

Rubrics

[Salad Dressing Rubric](#)

Bibliography

<http://www.youtube.com/watch?v=R7sYROUNO7g>

Authors

[Liz Dalton](#)