Let's Eat: Exploring Food Science

Cold Foam/Air Design Challenge

What makes a successful cold foam or air product?

Introduction
Lecithin is an emulsifier used to stabilize recipes that mix polar and nonpolar ingredients. In the food industry, soy lecithin is the most widely used emulsifier in food products. Since soy lecithin is soluble in both fat and water, it can be used to make either oil/water emulsions or air/water emulsions, converting almost any flavored liquid into a light airy foam.

Challenge
At the Gogolski Innovation Lab, your lab team has been hired by a local coffee shop to create a flavored cold foam or air product for either a cold brew or iced tea beverage. During the team meeting to discuss this product development, your lab supervisor informs you that based on consumer research, the average consumption time of this type of beverage is 10-15 minutes. Using the resources provided within the Gogolski Innovation Lab and research gathered from protocols, your team will need to create a stable cold foam or air product that will slowly dissolve in 10 minutes at the minimum.

In order for your team to be able to recreate/remediate your foam/air product, you are required to submit a written SOP (Standard Operating Procedure) to the lab supervisor that needs to include the following information:

SOP Components

Title: (Every standard operating procedure will have a unique title depending on what it's outlining.)

Scope of SOP: (This section covers the purpose of the SOP and the process it covers and why it's important to follow the enclosed steps, like compliance and/or safety. Also include resources/links used)

Materials: (complete list of items used to make your teams product including glassware/equipment)

Procedure: (remember this should be written in 3rd person and include any math formulas used to figure out percentages of materials used)

Your lab team will also need to submit proper data tables on dissolve/stability rates for at least 5 trials.