

Chapter 6: Meat, Fish, Poultry & Eggs



FoodMASTER

Food, Math, and Science Teaching Enhancement Resource
Supported by NIH Science Education Partnership Award (SEPA)





Food Explorations Lab I: The Building Blocks

Lab I: The Building Blocks

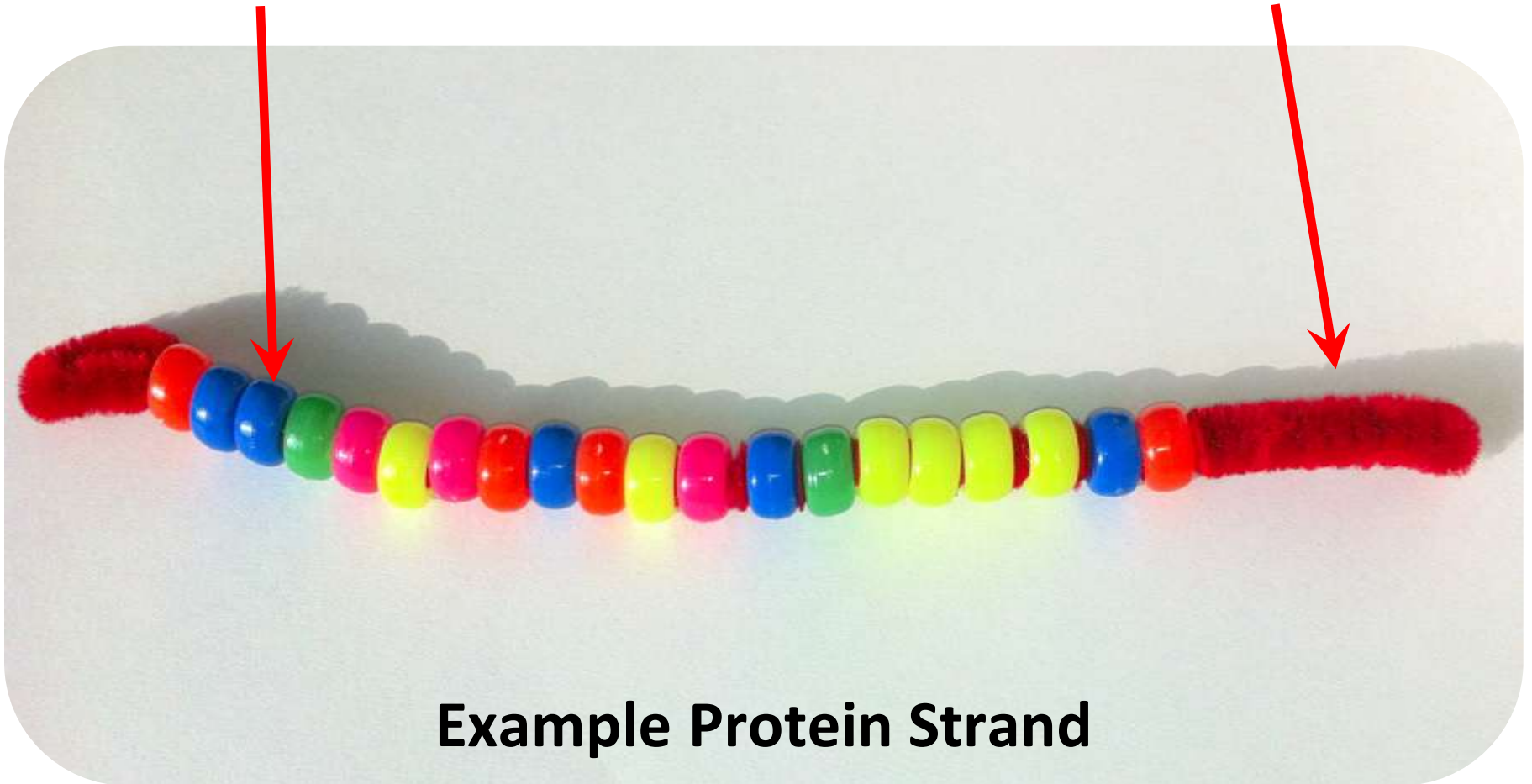


[Getting started... What to Expect in Lab I](#)

Lab I: The Building Blocks

Bead = Amino Acid

Fold Ends



Example Protein Strand



Food Explorations Lab II: Synthesizing Muscles

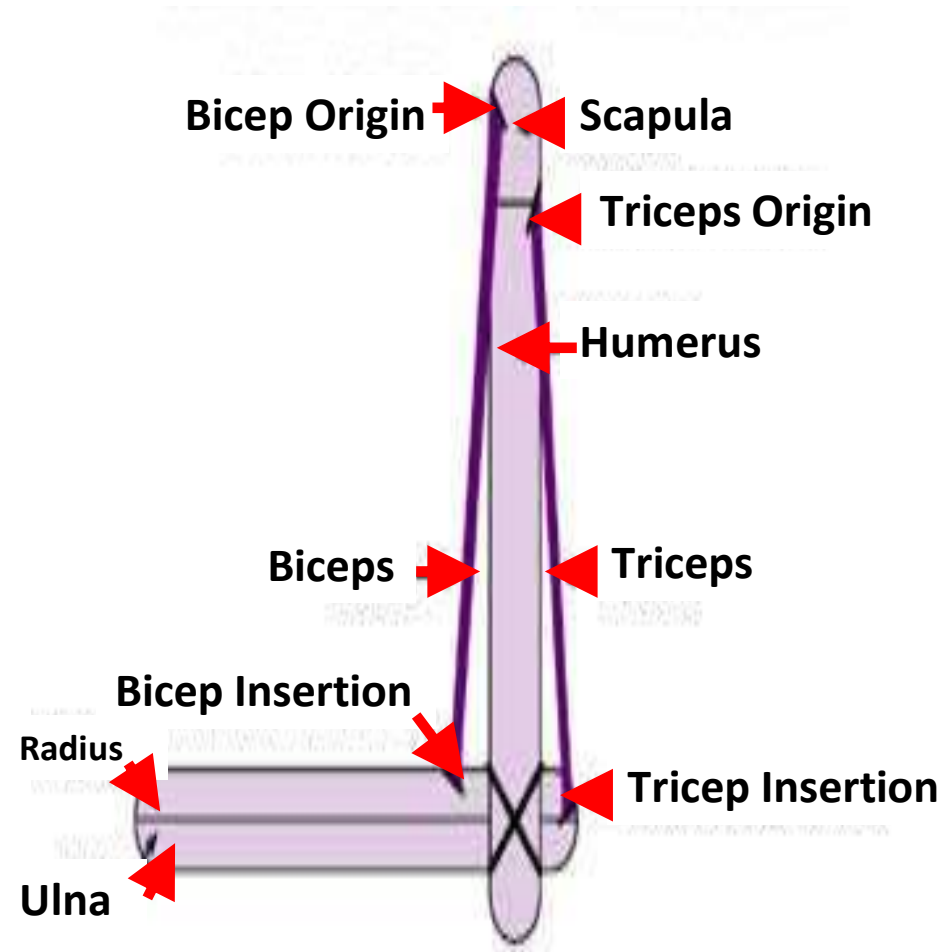
Lab II: Synthesizing Muscles




Example of the constructed arm

Lab II: Synthesizing Muscles

SIMPLE MODEL OF HUMAN ARM





Food Explorations

Lab III:

Foam Formulations

Lab III: Foam Formulations



Breaking an egg and separating the white from the yolk.

Lab III: Foam Formulations



Separate egg yolk from white using an egg separator.

Lab III: Foam Formulations



[Getting Started... What to Expect in Lab III - Part A](#)

Lab III: Foam Formulations



Getting started... What to Expect in Lab III – Part B.

Lab III: Foam Formulations



Whisk the egg white until it becomes foamy (i.e. foam on a recently poured carbonated drink). This is the “no peaks” stage.

Lab III: Foam Formulations

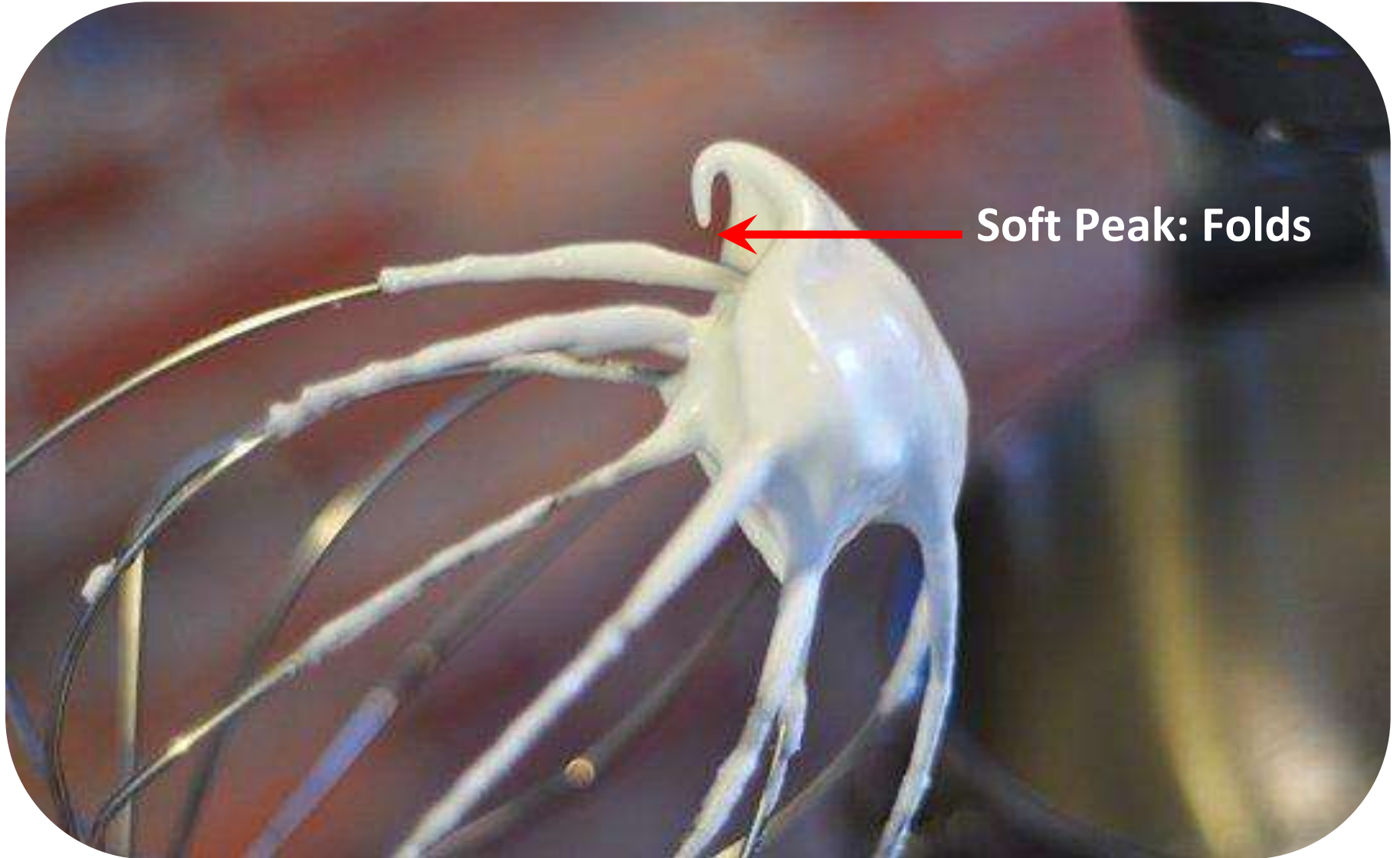


Lab III: Foam Formulations



Soft Peaks: Beat until egg whites form peaks that bend slightly at the tips.
The foam should be shiny and moist.

Lab III: Foam Formulations

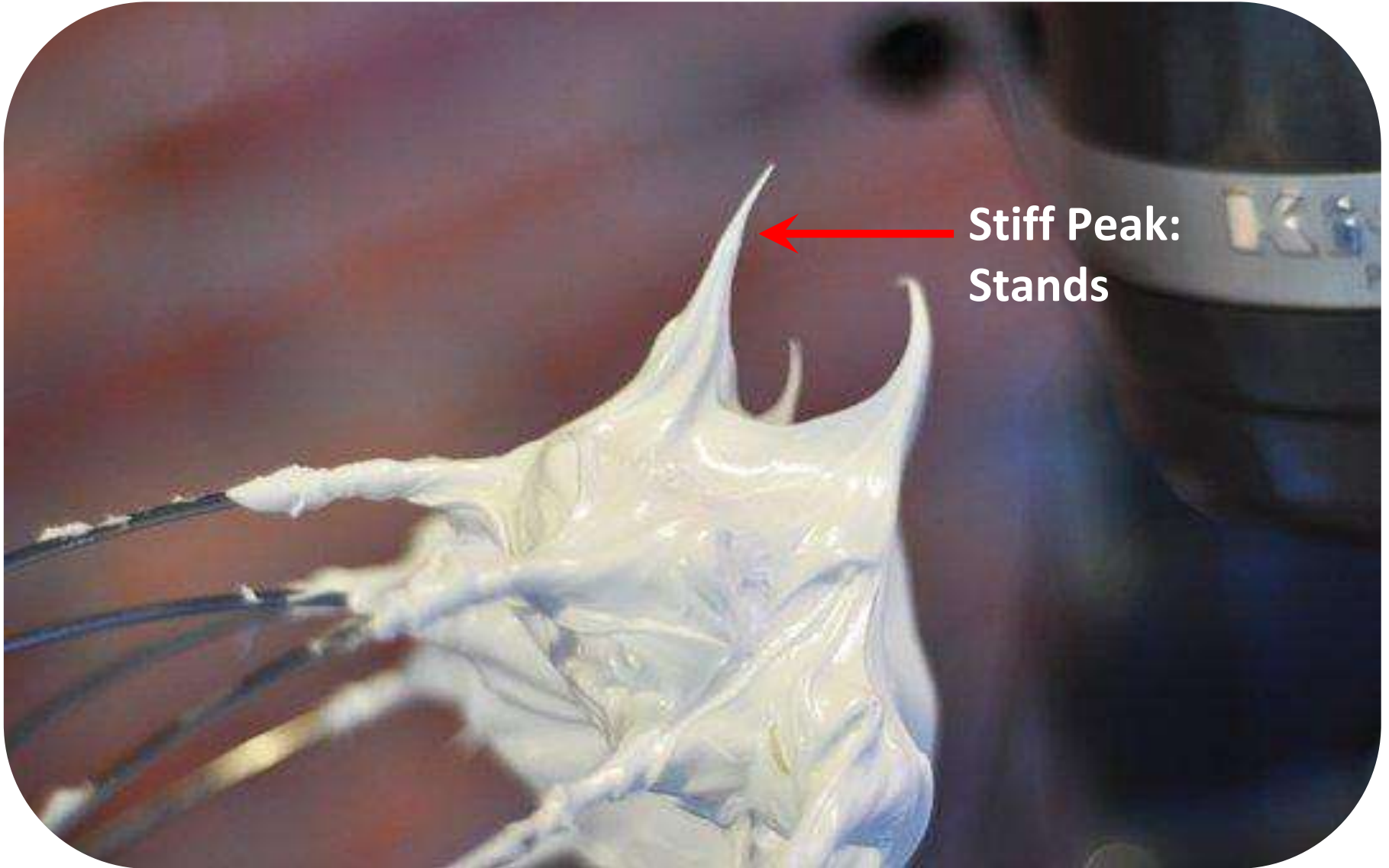


Lab III: Foam Formulations



Stiff Peaks: Beat the egg white until the foam no longer slips when the bowl is tilted.

Lab III: Foam Formulations



Stiff Peak:
Stands

Lab III: Foam Formulations



Overbeaten: Beat the egg white until the foam begins to break down and become grainy. Liquid may begin to drain from the foam.

Lab III: Foam Formulations



Lab III: Foam Formulations



Sugar Treatment

Lab III: Foam Formulations



Fat Treatment

Lab III: Foam Formulations



Acid Treatment

Lab III: Foam Formulations



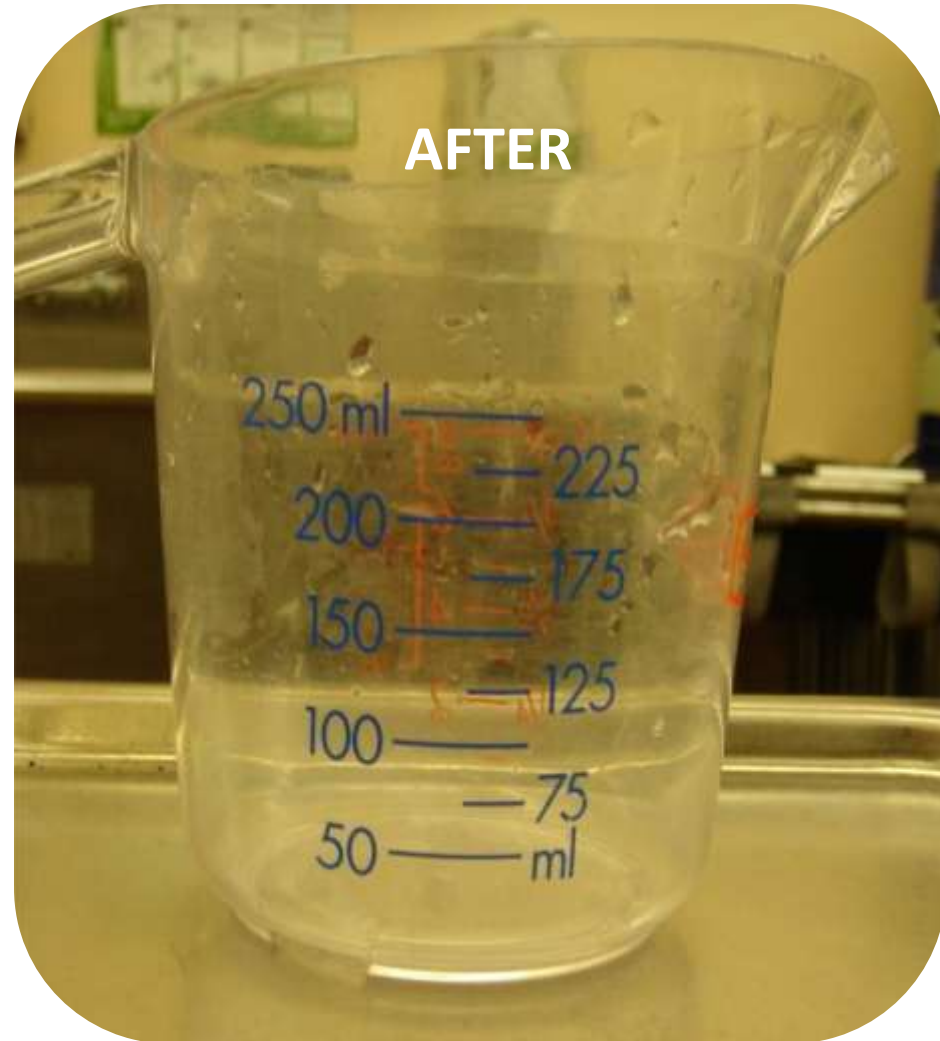
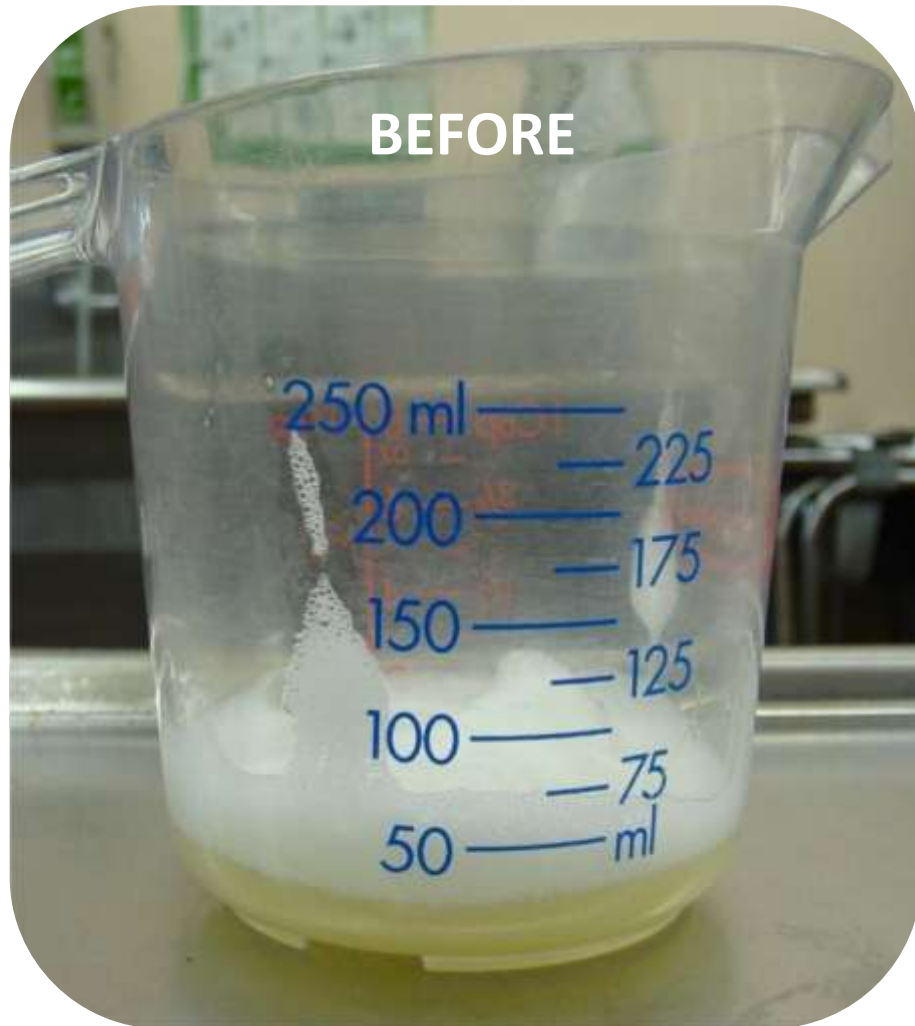
Salt Treatment

Lab III: Foam Formulations (Foam Emulsions)



Using a rubber spatula, push the egg white foam into a funnel.

Lab III: Foam Formulations (Foam Emulsions)



**Foam Leakage
(Sugar Treatment)**

Lab III: Foam Formulations



Deviled Eggs



Omelet

Lab III: Foam Formulations



Quiche



Fried Egg

Lab III: Foam Formulations



Poached Eggs



Lemon Meringue Pie