

Chapter 5: Milk & Cheese



FoodMASTER

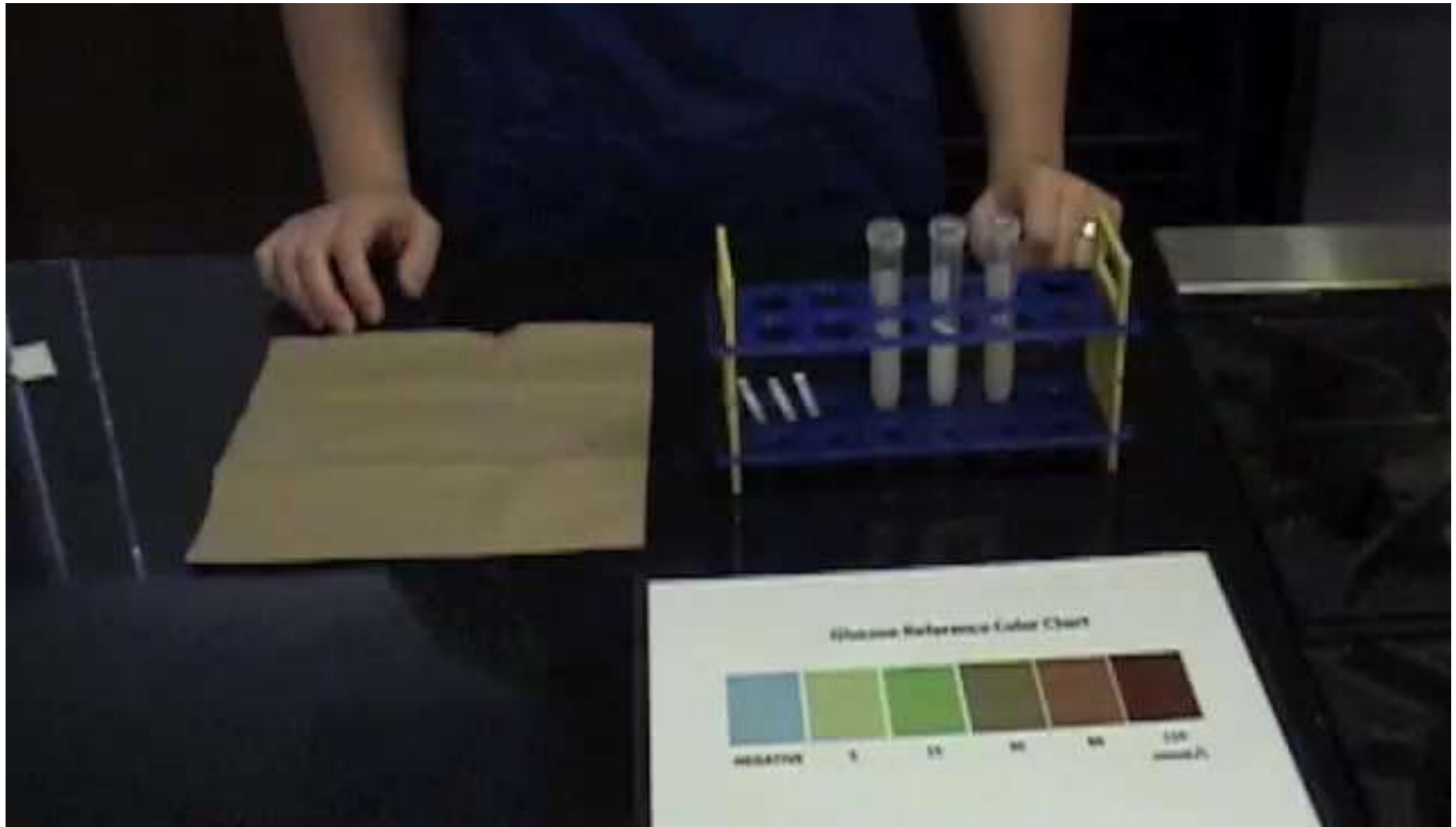
Food, Math, and Science Teaching Enhancement Resource
Supported by NIH Science Education Partnership Award (SEPA)





Food Explorations Lab I: Explicit Enzymes

Lab I: Explicit Enzymes



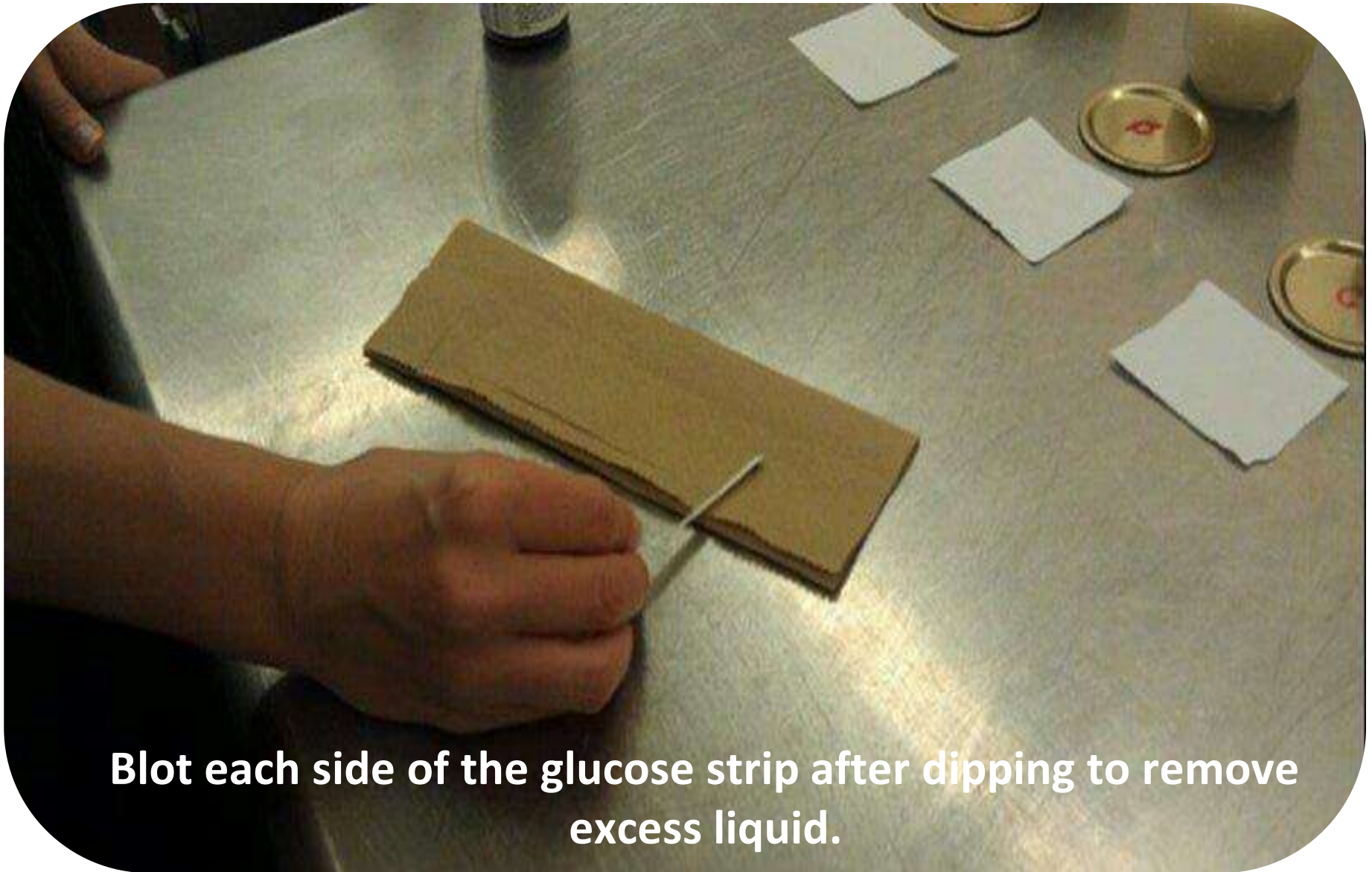
Getting started... What to Expect in Lab I

Lab I: Explicit Enzymes

Milk Samples



Lab I: Explicit Enzymes



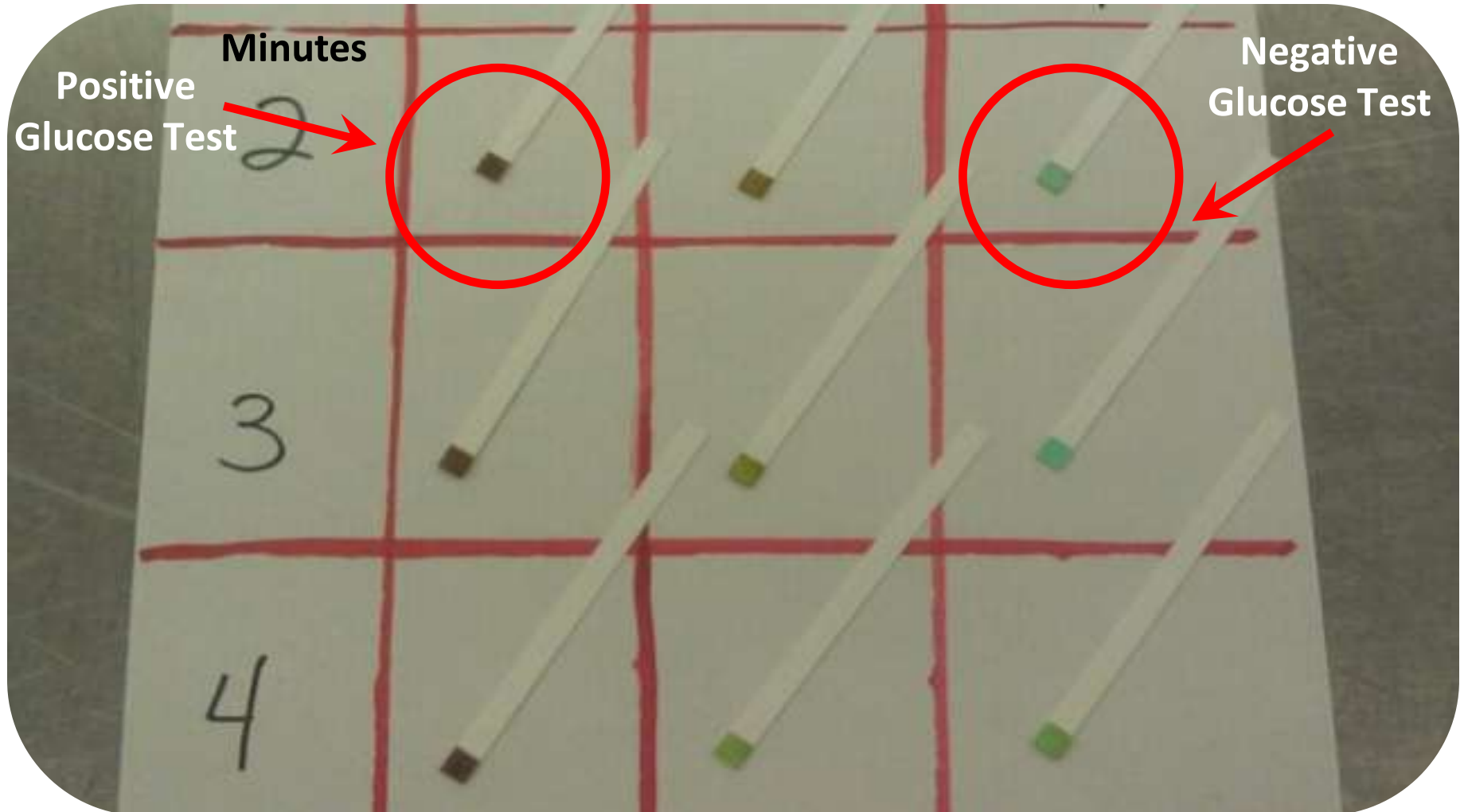
Blot each side of the glucose strip after dipping to remove excess liquid.

Lab I: Explicit Enzymes



Glucose strips - 0 minutes

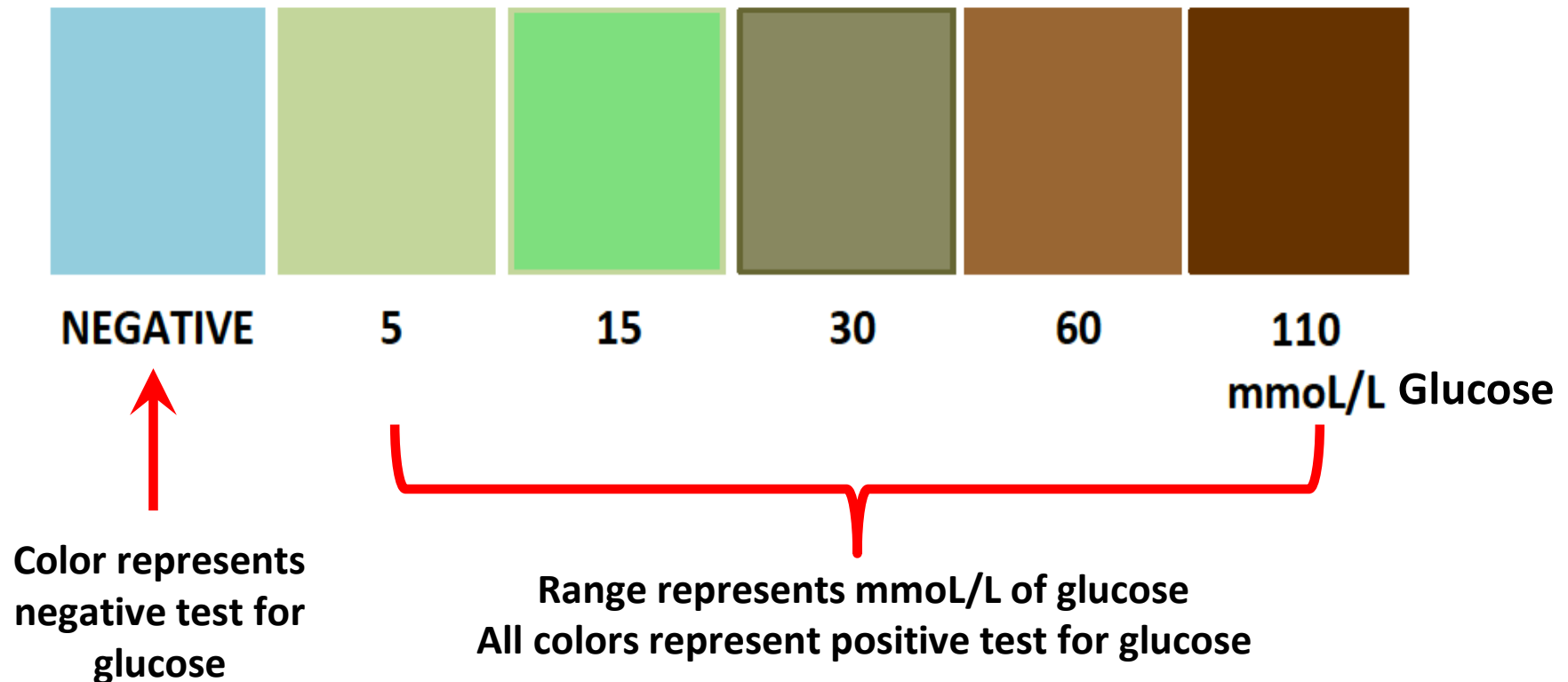
Lab I: Explicit Enzymes



Glucose concentrations at 2, 3, and 4 minutes.

Lab I: Explicit Enzymes

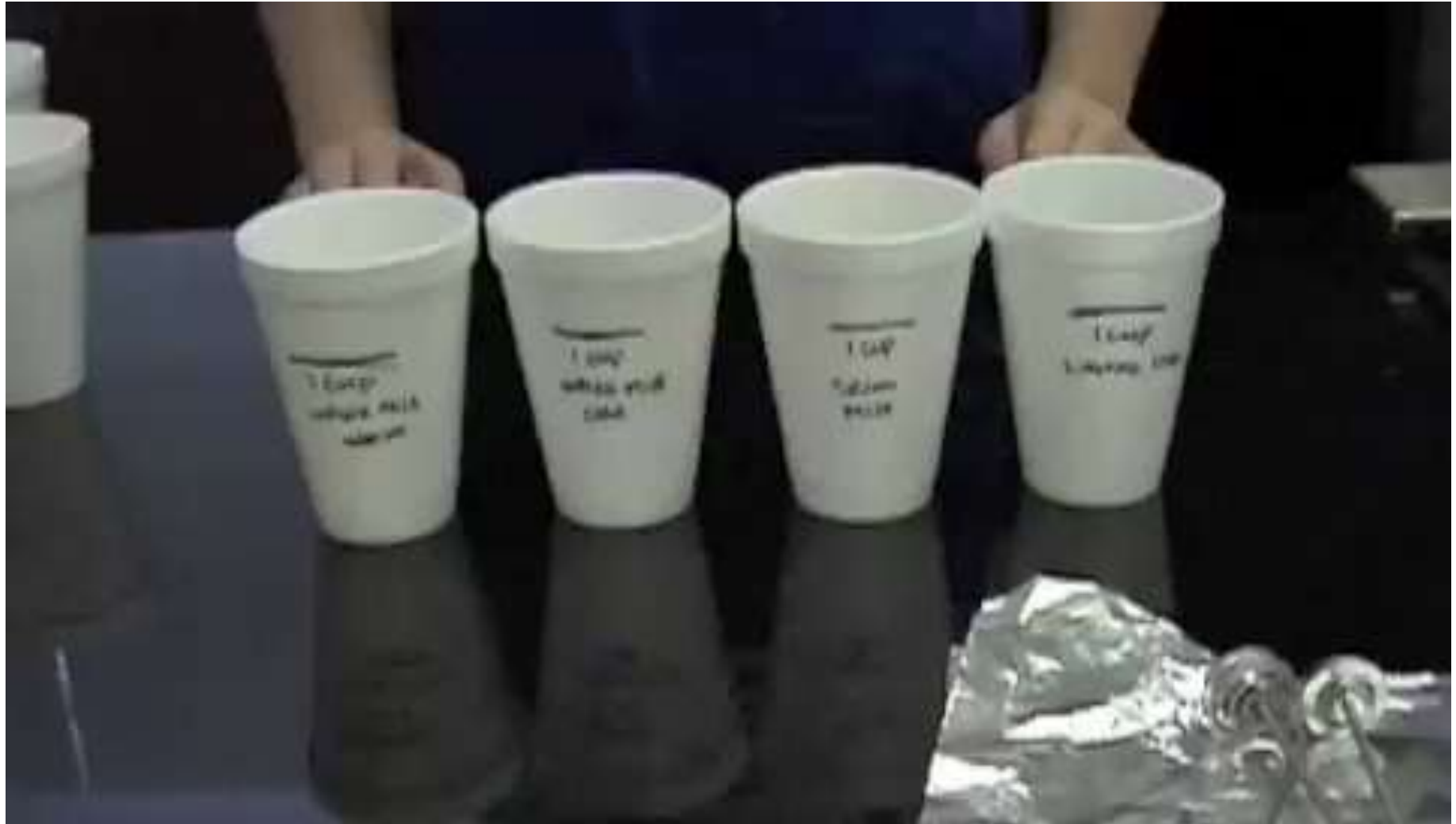
Glucose Reference Color Chart





Food Explorations Lab II: Magnificent Microbes

Lab II: Magnificent Microbes



Getting started... What to Expect in Lab II

Lab II: Magnificent Microbes



Your teacher will heat milk types to 175°F for each group.

Lab II: Magnificent Microbes



Milk Samples

Lab II: Magnificent Microbes



Comparison of the consistencies of the yogurt.

Lab II: Magnificent Microbes



Comparison of the consistencies of the yogurt.

Lab II: Magnificent Microbes

Lactose Free Milk



Whole Milk - Warm



Comparison of excess liquid on top of yogurt.

Lab II: Magnificent Microbes

Skim Milk



Whole Milk - Cold



Comparison of excess liquid on top of yogurt.



Food Explorations Lab III: Maintaining Mass

Lab III: Maintaining Mass



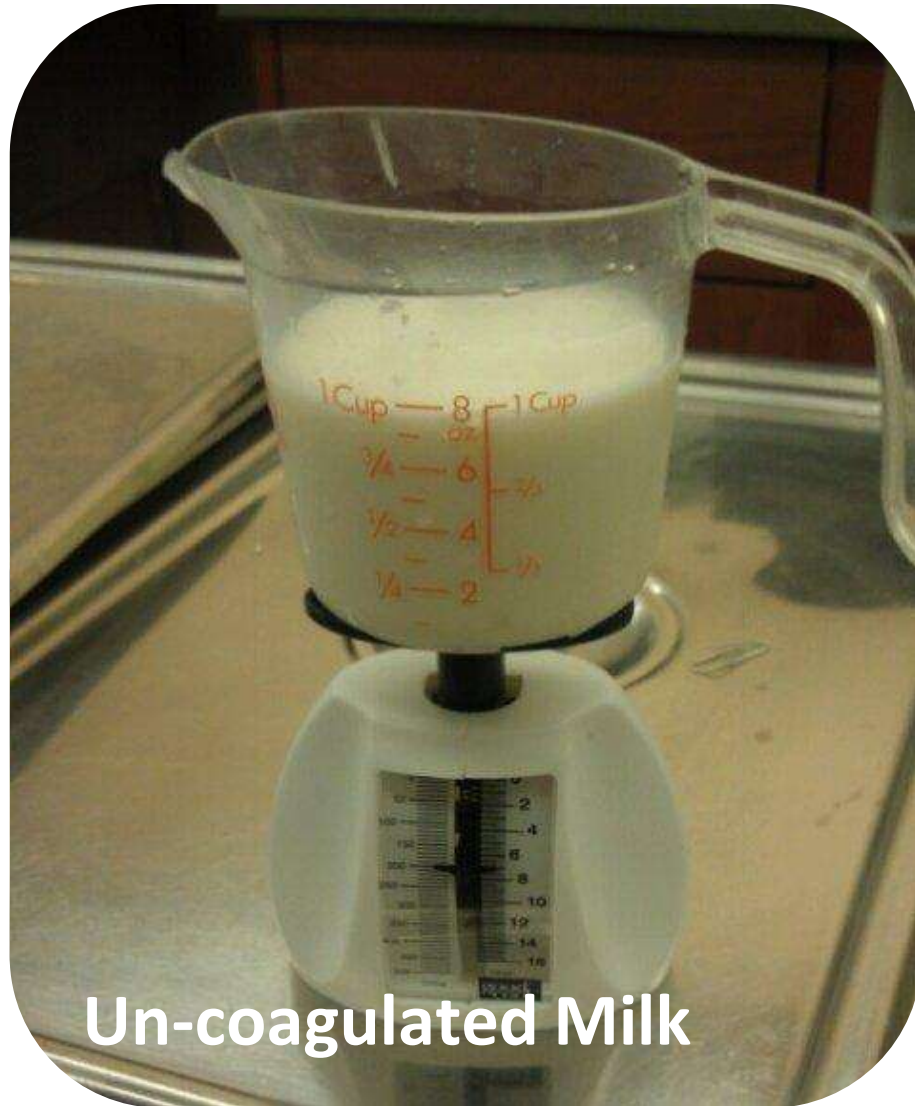
Teacher Demonstration

Lab III: Maintaining Mass



Getting started... What to Expect in Lab III

Lab III: Maintaining Mass



Un-coagulated Milk



Vinegar

Weight of un-coagulated milk and vinegar.

Lab III: Maintaining Mass



2 cups of 2% milk - before treatment.

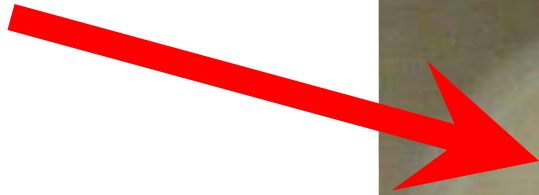
Lab III: Maintaining Mass



**Separation of
whey and curd**

Lab III: Maintaining Mass

**No separation of
curd and whey**



Lab III: Maintaining Mass



Coagulated proteins in strainer

Lab III: Maintaining Mass



No coagulated proteins