

Current Research Emphases and Career Paths in Food Packaging

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Kerry Inc.



Food Packaging Laboratory

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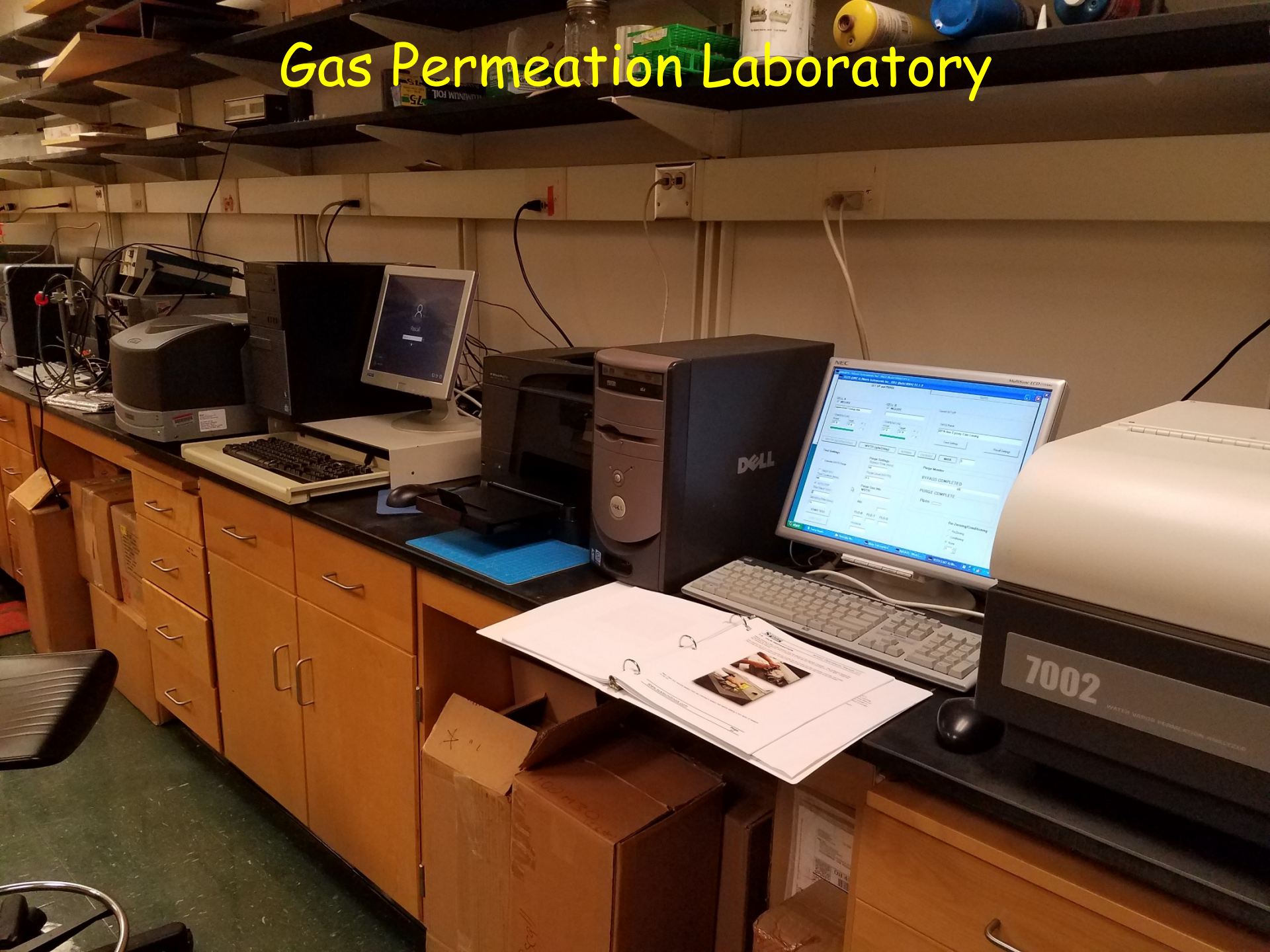


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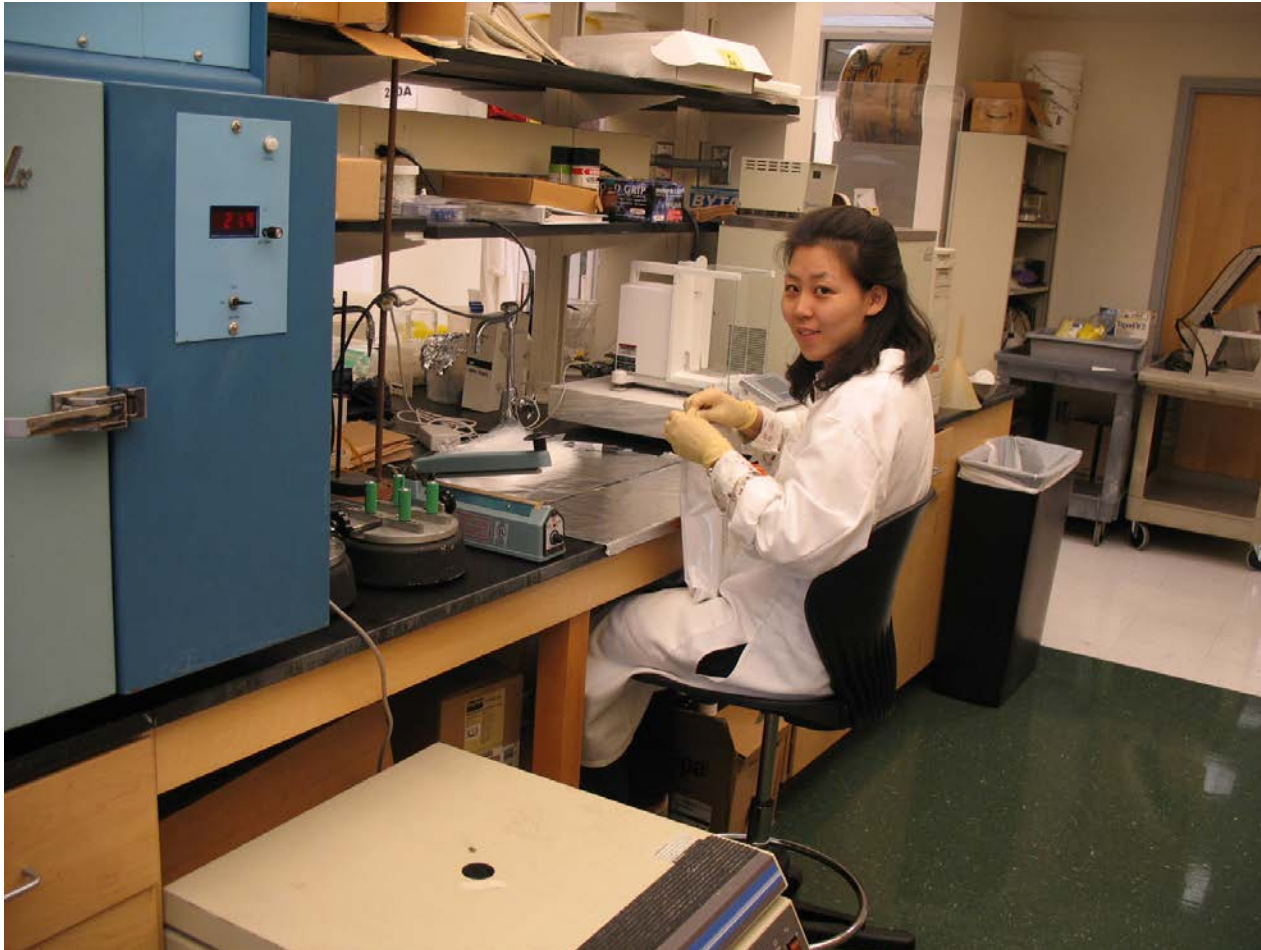
Food Packaging Laboratory

Gas Permeation Laboratory

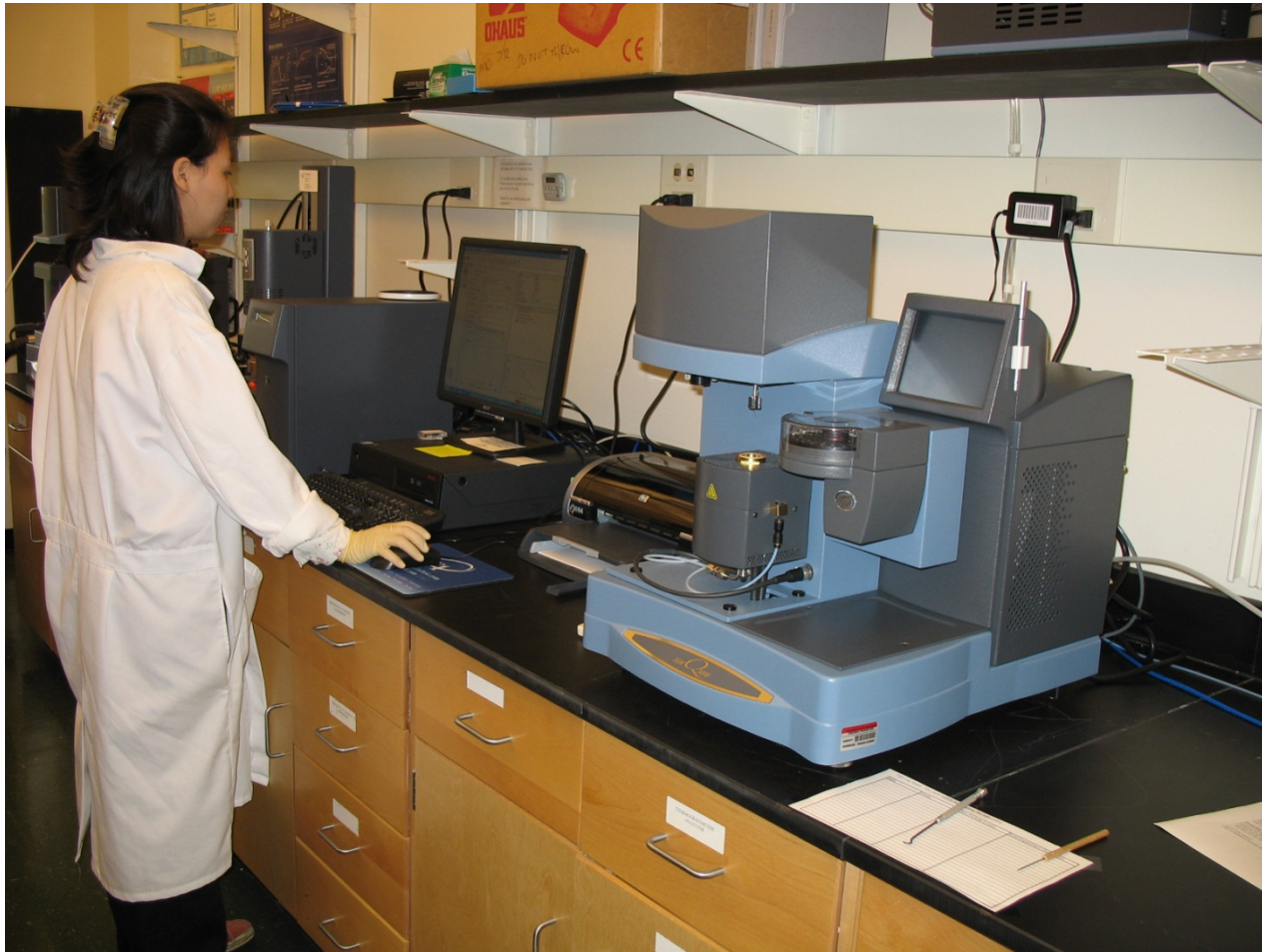




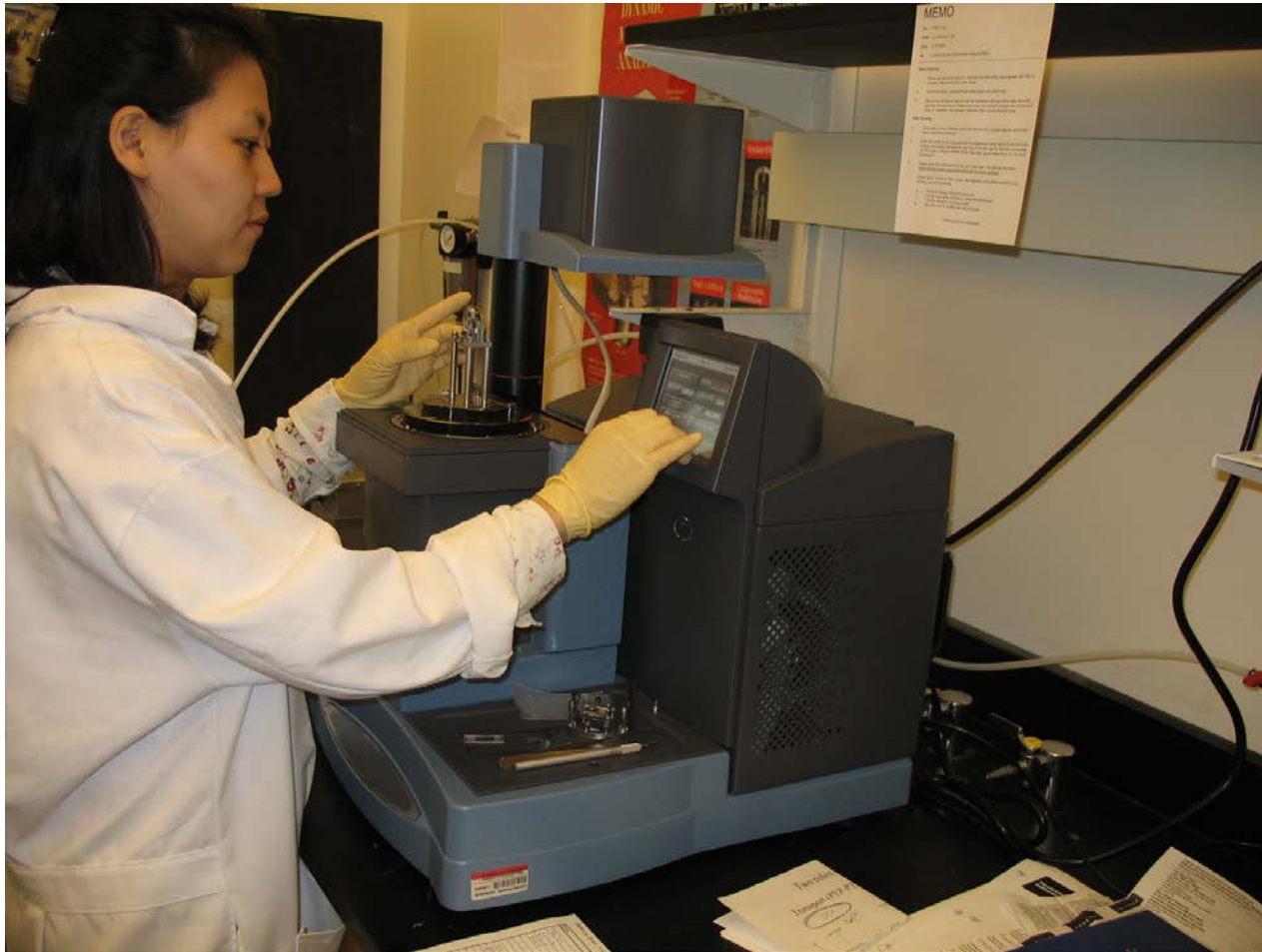
Research: Effect of High Pressure Processing on the Permeability of Plastics



Research: Effect of HPP on the Mechanical Properties of Plastics



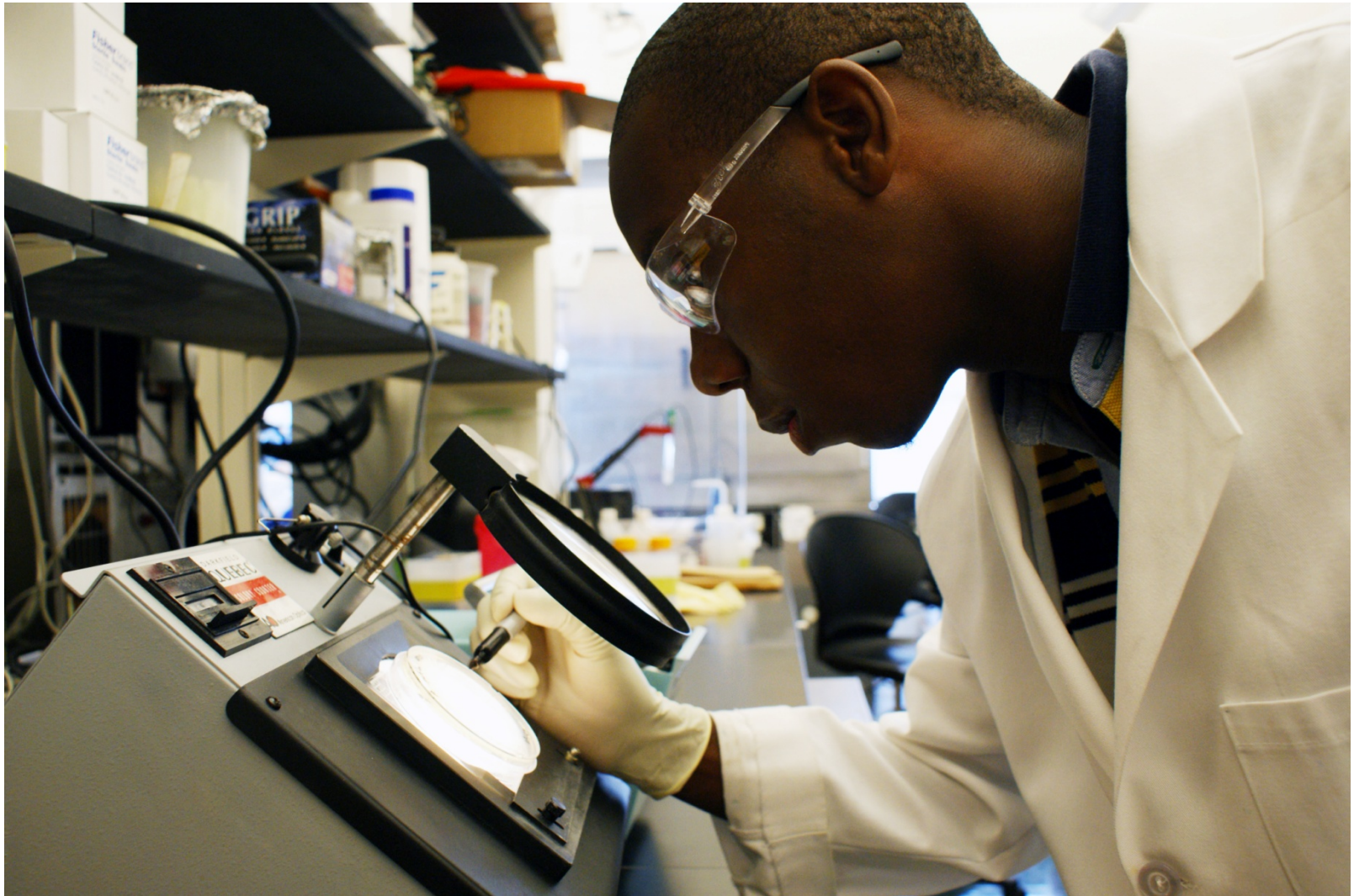
Dynamic Mechanical Analysis (DMA)



Research: Efficiency of various sanitizers on food contact surfaces



Research: Antimicrobial Packaging of Fish



Humidity Chamber for Shelf life Studies

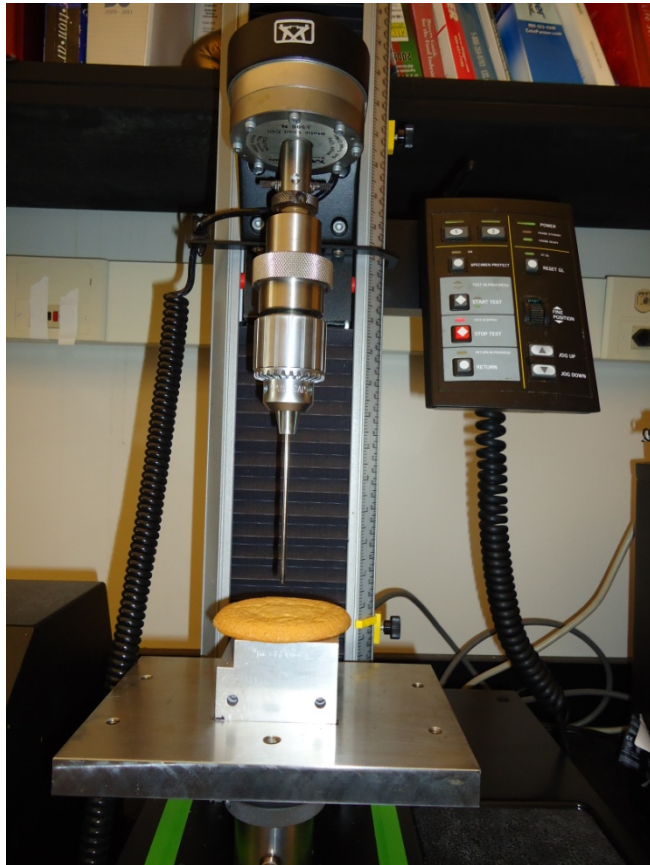


Research: Shelf life of Cookies





Cookies with Filling and Texture Testing



Edible film used to enhance the marketable of pizza



Coffee Decoration Using Edible Packaging



Research: Efficiency of various sanitizers on food contact surfaces (conveyor washer)



Research: Efficiency of various sanitizers on food contact surfaces (batch-type washer)



Research: Efficiency of various sanitizers on food contact surfaces (manual washer)



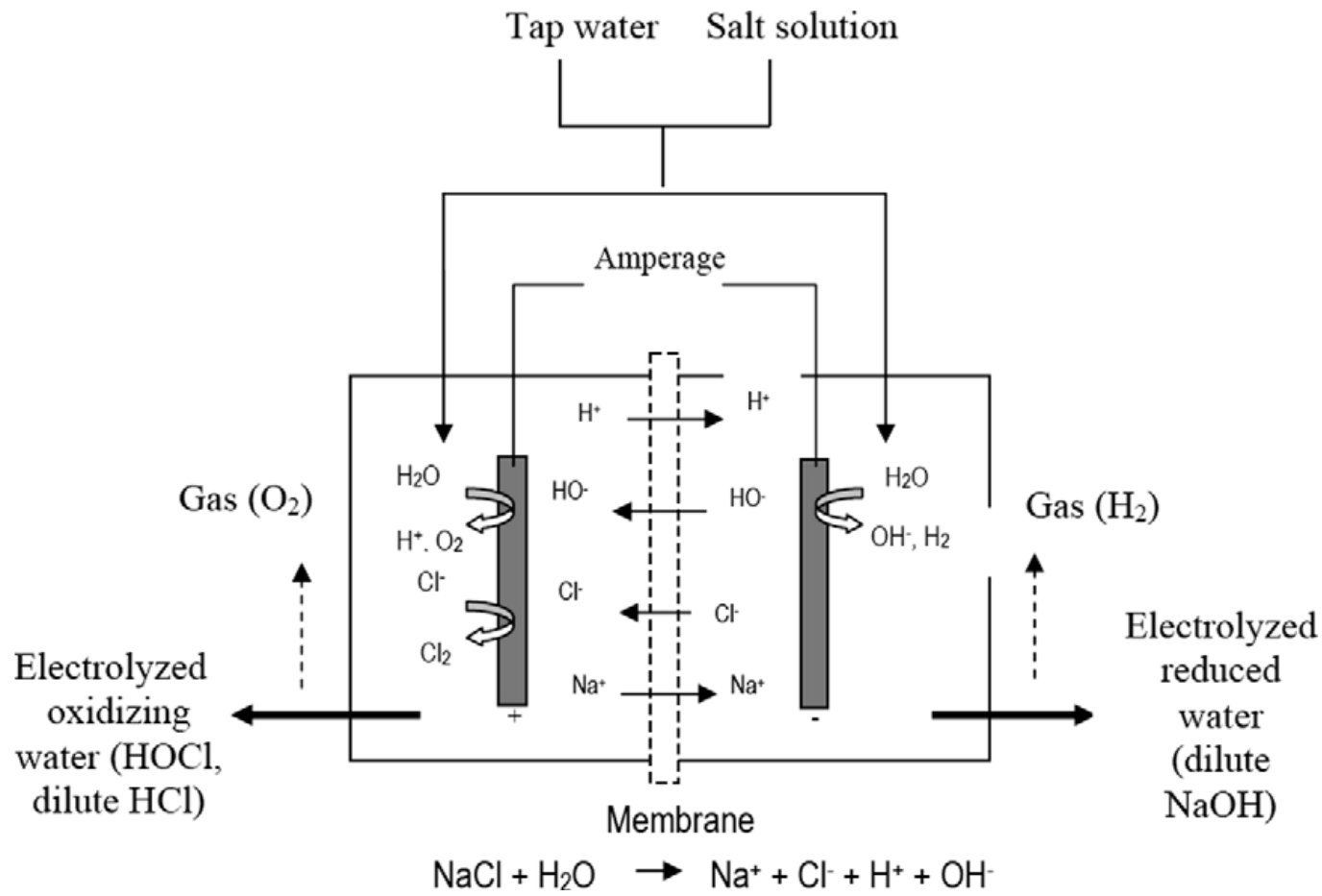
Materials

- Bacterial samples
 - *Escherichia coli* K12
 - *Listeria innocua*
- Food Samples
 - Cream Cheese (plates & trays)
 - Whole Milk (drinking glasses)
- Sanitizers used at manufacturers recommended concentrations



The Use of Electrolyzed Water as a Sanitizer During Ware Washing Studies

Neutral Electrolyzed-Oxidizing Water (NEW)





110

 **Trustwater™**



Color changing plastic for detection of bacterial toxins



Development of an Expandable Straw for Beverage Cans



Development of Acid Zap an Externally Used Anti-acid



Instant
All Natural



Eat And Drink To Your Hearts Desire!

With Acid Zap™, enjoy food once again.

50 Million People suffer from acid reflux, Finally there is a product -
Only one product, That takes acid out, to enjoy foods now!

That is right. Acid Zap™, the revolutionary additive that will allow
your customers to once again enjoy Coffee, Juices and Beverages
that have been off-limits! This patented formula treats their favorite
foods or beverage **BEFORE** it is consumed.



• It's New • It's Patented • It Works

Nutrition Facts

Serving Size 1 tsp (5g)

Servings Per Container about 48

Amount Per Serving

Calories 0

Calories from Fat 0

% Daily Value*

Total Fat 0g

0%

Saturated Fat 0g

0%

Trans Fat 0g

Cholesterol 0mg

0%

Sodium 140mg

6%

Total Carbohydrate 0g

0%

Dietary Fiber 0g

0%

Sugars 0g

Protein 0g

Vitamin A 0%

• Vitamin C 0%

Calcium 0%

• Iron 0%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

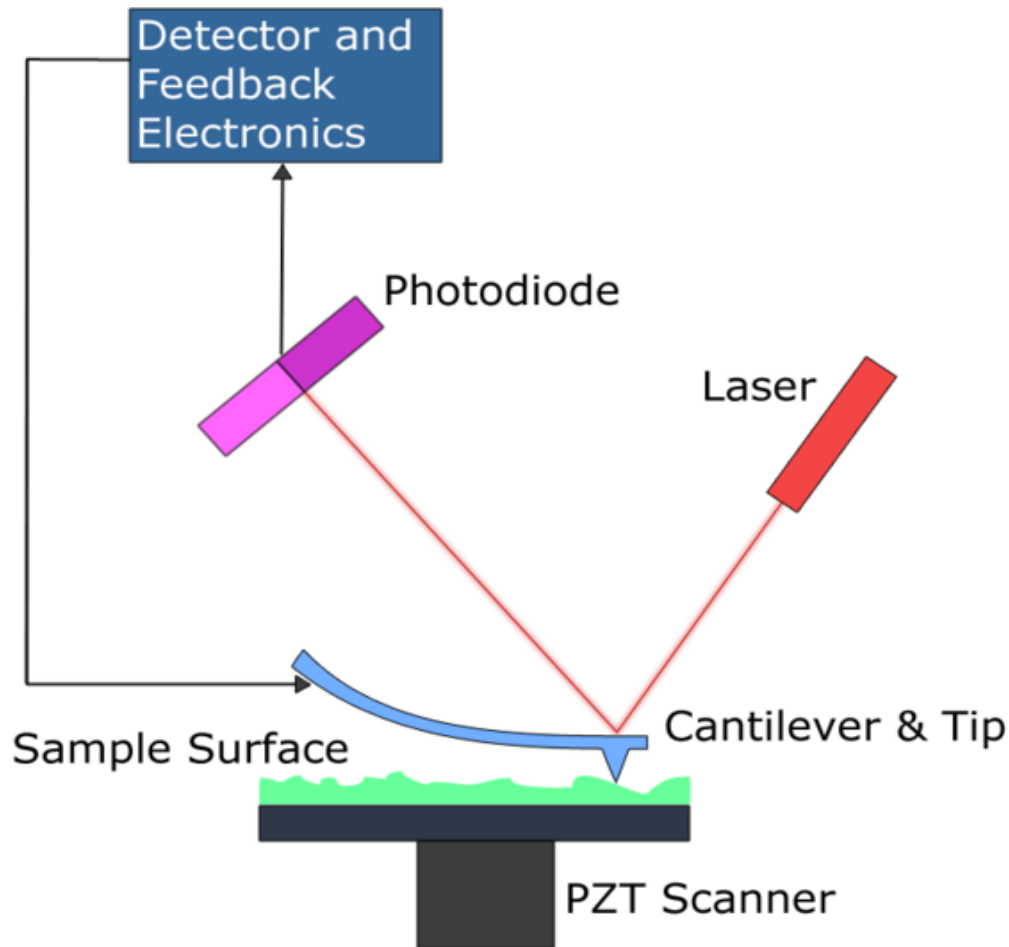
	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

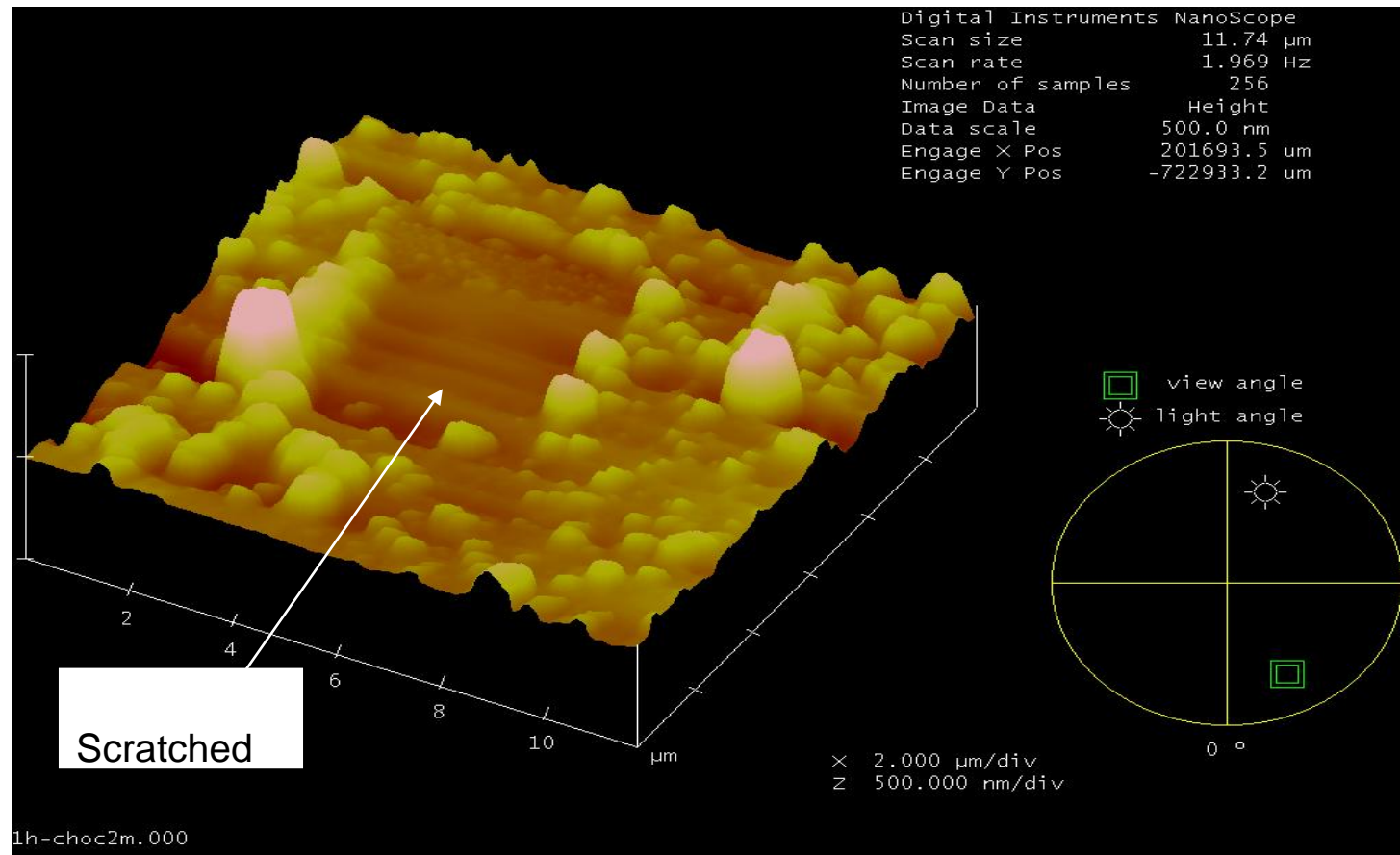
The Use of Atomic Force Microscopy to Measure the Stickiness of Food Contaminants

Atomic Force Microscopy (AFM)

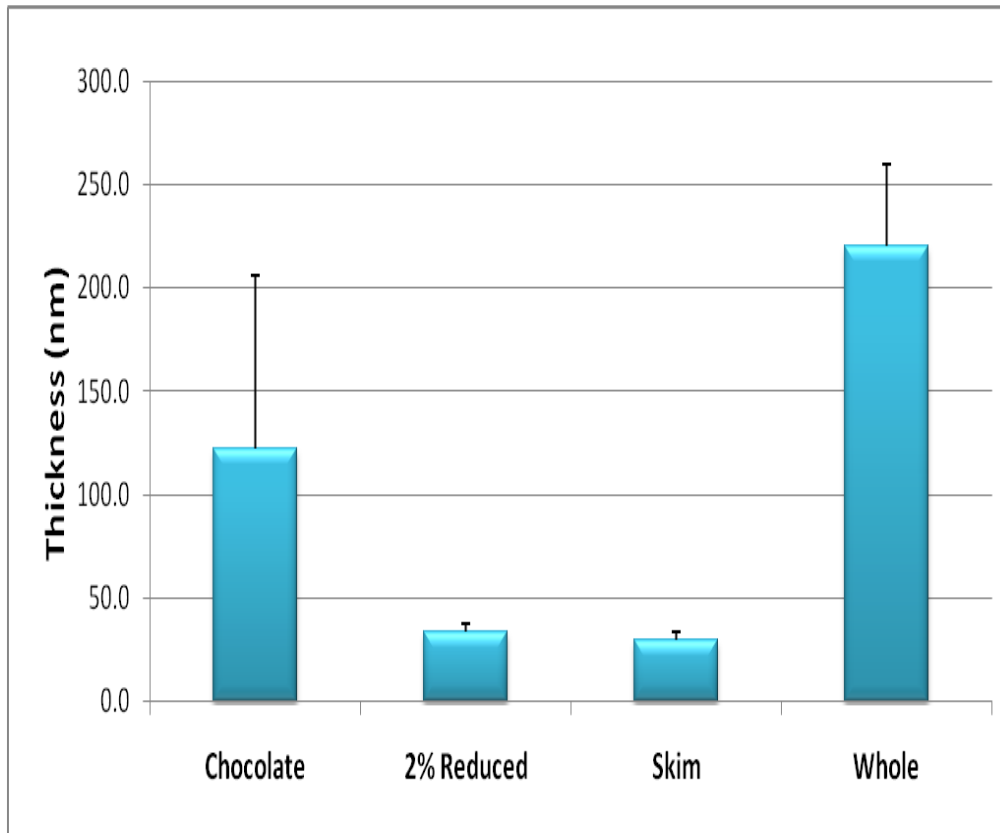


AFM – 3D Image

(Surface of scratched milk film)



Thicknesses - AFM



- The thickness values for the film of milk products varied considerably.
- Whole milk had a stronger adhesion strength to glass surface when compared with other milk samples.
- Chocolate milk had the highest variability in thickness when compared with the other samples.



Shelf-life Extension of Seafood Using Sanitized Ice

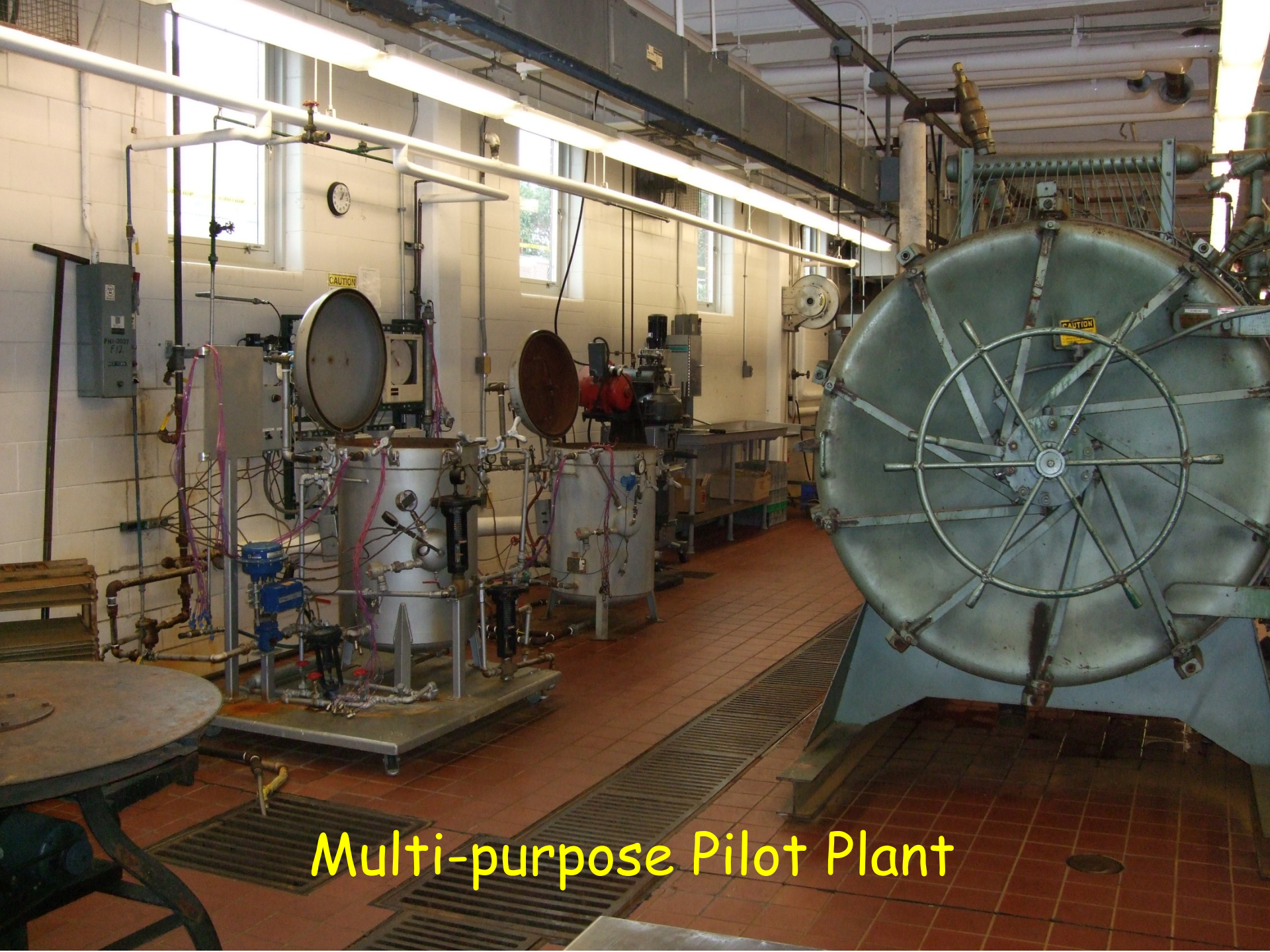


Color Changing Screw-type Caps





Multi-purpose Pilot Plant



Multi-purpose Pilot Plant



Multi-purpose Pilot Plant



Dairy Pilot Plant



Dairy Pilot Plant

Graduate Students Office

