

## Lecture 9

### Uses of Egg

**Binder:** One of the uses of eggs is as a binder. A binder helps other ingredients bind together (eggs are used to help bind together meatballs, meatloaf and flour mixtures). When eggs are heated they coagulate, this helps stick together the ingredients they are mixed with.

**Coating:** Another use of eggs is as a coating agent. The breading on fried chicken sticks because the chicken is dipped into an egg then a flour or crumb mixture. The eggs help hold the crumb mixture to the food when heated during the cooking process.

**Thickening:** Eggs have thickening properties. The protein in eggs will thicken when heated and become firm. If an egg is overheated or cooked for too long of a time it will become rubbery and tough in texture. Eggs are often used in custards and sauces to thicken the finished product.

**Emulsifier:** Eggs are an **emulsifier**. An emulsifier permits small globules of one liquid to be inter-dispersed in another liquid. For example in mayonnaise the egg acts as an emulsifying agent in keeping the oil and vinegar mixed as one product and not separating out. Eggs also are emulsifiers in cakes.

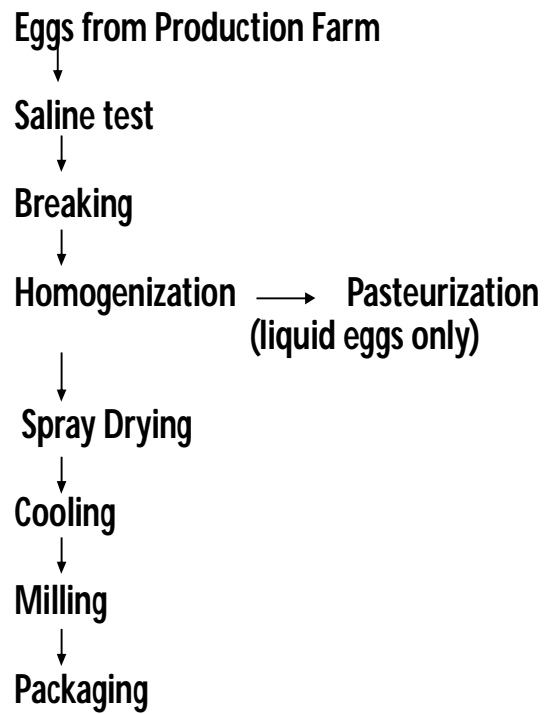
**Crystallization:** When a liquid freezes, ice crystals form. When eggs are added to a mixture, it helps prevent these crystals from forming. That is why another use of eggs is the prevention of **crystallization**.

**Clarifier:** The one use of the egg you probably are not very familiar with is using eggs as a **clarifier**. The egg is used to make a broth clear. Any unwanted particles in the broth will stick to the egg as it coagulates in the broth. The cooked egg is then removed.

**Leavening:** One of the most common uses of eggs is as a **leavening agent**. A leavening agent helps to make a cooked product rise. When eggs are beaten they hold air. When heat is added the structure will coagulate and traps the air. This is what gives angel food cakes, meringues and soufflés their light and fluffy texture.

# EGG POWDER PRODUCTION

- Egg Products Processing and distribution Module



# Summary table

## Processed Egg Products

<i>Product</i>	<i>Use</i>	<i>Properties</i>
<i>Liquid Whole Egg</i>	Bakery products, Omelette mix, Pie Filling	
<i>Liquid Egg White (Albumen)</i>	Bakery products, high protein foods, sausages etc	Binding, whipping
<i>Liquid Egg Yolk (Yellow)</i>	Salad Dressings, Sauces, Mayonnaise	Emulsifying
<i>Frozen Salted Yolk</i>	Salad Dressings, Sauces, Mayonnaise	Emulsifying
<i>Frozen Salted Whole</i>	Salad Dressings, Sauces, Mayonnaise	Emulsifying
<i>Frozen Sugared Yolk</i>	Bakery Items	Emulsifying
<i>Frozen Whole Egg</i>	Replacement for Shell or Liquid Egg	
<i>Dried Egg Whites</i>	Replacement for Fresh Egg White in bakery products, high protein foods, sausages etc	Binding, whipping
<i>Dried Egg Yolks</i>	Replacement for liquid or frozen yolks	Emulsifying