

Exploring Food Science – What's On Your Plate?

Eggs Are Exceptional

The Right Heat for the Eggs You Eat

Activity 2.1 Glossary

Aeration

The process during which air is incorporated into a substance, in this case a food, making the food item light and fluffy.

Albumin (al-'byü-mən)

The clear liquid portion of an egg, rich in protein. It is also commonly referred to as the egg white.

Chalaza (kə-'lā-zə)

The part of the egg which anchors the yolk in the center of the egg. It looks like a tiny, thin, white twisted rope.

Coagulation

The process of a liquid changing into a solid form such as a gel.

Egg White

The clear liquid portion of an egg, also called the albumin.

Emulsifying Agent

A substance (such as lecithin in egg yolks) that prevents two other substances from separating, (such as water and oil).

Functional Properties

The role an ingredient performs in a recipe.

Grades of Eggs

The quality rating given to eggs by U.S.D.A. Eggs are classified from highest to lowest quality in accordance with the following: Grade AA, Grade A, and Grade B. Grade B eggs can only be sold to food service establishments and are not available at the grocery store.

Protein Denaturation

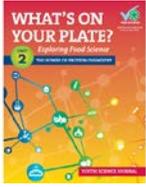
An irreversible process that changes the structure of the protein.

Syneresis

The separation of liquid from a gel, such as when beaten or whipped egg whites stand for a period of time, a liquid seeps out of them.

Yolk

The yellow portion of the egg which contains protein, saturated fat and cholesterol plus naturally occurring emulsifying agents.



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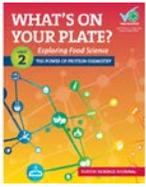
Make Sense of Soufflés

Activity 2.2 Glossary

<u>Amino Acids</u>	The building blocks or components that make up protein
<u>Cream of tartar</u>	An acid that makes egg white foams stronger by stabilizing the foam structure
<u>Egg albumin</u>	The part of an egg commonly known as the egg white; rich in protein
<u>Egg white foam</u>	Albumin which has undergone physical changes from whipping or beating, which incorporates air into the albumin and coagulates the protein making the albumin stiff. Egg white foams are used in soufflés and puffy omelets. Commonly called “beaten egg whites.”
<u>Fold</u>	A mixing technique typically used when gently blending egg white foams with other ingredients, maintaining the volume of the foam. Using a broad utensil, ingredients from the bottom of the bowl are brought up and “folded” over the top of the other ingredients. This action is repeated until the ingredients are mixed.
<u>Protein coagulation</u>	The process in which liquid protein molecules turn into a soft, semisolid, or solid mass or gel. Egg white protein is physically changed from liquid to solid by the mechanical action of beating or whipping.
<u>Soufflé</u>	A dish formed using egg white foams, egg yolks, flour, and flavoring ingredients such as chocolate, cheese and purees of fruits and vegetables. A soufflé may be a dessert or a main dish.
<u>Stabilizing agent</u>	An ingredient (such as cream of tartar, an acid or sugar) that protects and maintains a substance, such as an egg white foam.
<u>Syneresis</u>	The separation of liquid from a gel, such as when beaten or whipped egg whites stand for a period of time, a liquid seeps out of them.
<u>Wire whisk</u>	A kitchen tool comprised of a handle attached to a series of wire loops, used to blend ingredients smooth or incorporate air into a mixture.

Source:

Merriam-Webster Dictionary



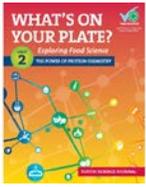
Exploring Food Science – What's On Your Plate?

Separating the Curds from the Whey

Queso Fresco Cheese

Activity 2.3 Glossary

Buttermilk	A thick, partially coagulated milk product made by adding acid-producing bacteria to milk.
Casein (kā-, sēn)	The major protein found in milk.
Catalyst (ka-tə-ləst)	A substance which facilitates and often speeds up a reaction.
Cheesecloth	A lightweight, thinly woven cotton fabric
Chymosin (kī-mə-səne)	An enzyme that serves as a catalyst in cheese production; causes the protein in milk to coagulate forming solids (curds).
Curd	The thickened (coagulated) part of milk which is protein.
Enzyme (en-zīm)	A protein that produces a chemical reaction.
Pasteurization	A high temperature process used for a period of time sufficient to destroy certain microorganisms, as those that can produce disease or cause spoilage or undesirable fermentation of food, without significantly altering the food's taste or quality.
Protease (prōt-ē-, ās)	An enzyme which breaks apart protein such as in the process of cheese making when the solids (curd) separate from the liquid (whey).
Queso Fresco (keh-so 'fres.ko)	A fresh cheese popular in Mexico. It is crumbly, mild-tasting, and often as a topping or ingredient in Mexican dishes. It is an unripened type of cheese.
Rennet (re-nət)	An enzyme that curdles milk, helping the coagulation process in cheese making.
Ripening	The process during which cheese is converted from a bland, tough, rubbery, curd into a unique, flavorful cheese. During ripening, cheeses are exposed to different temperatures and levels of humidity; it can take from four weeks to two years for this process to be complete.
Sanitation	Sanitation as applied in food safety is the second step after thorough cleansing and rinsing of a surface or utensil that comes into contact with food. The final step of sanitation uses a mild solution of water and bleach. This last step destroys most pathogenic (disease causing) bacteria.



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Queso Fresco Cheese

Activity 2.3 Glossary

Vinegar

Vinegar is a mixture of acetic acid and water produced by fermentation. There are many types of vinegar such as white, apple cider, red wine, rice, and balsamic vinegar made from grapes.

Whey

A liquid protein component of milk often separated from casein during cheese manufacturing.