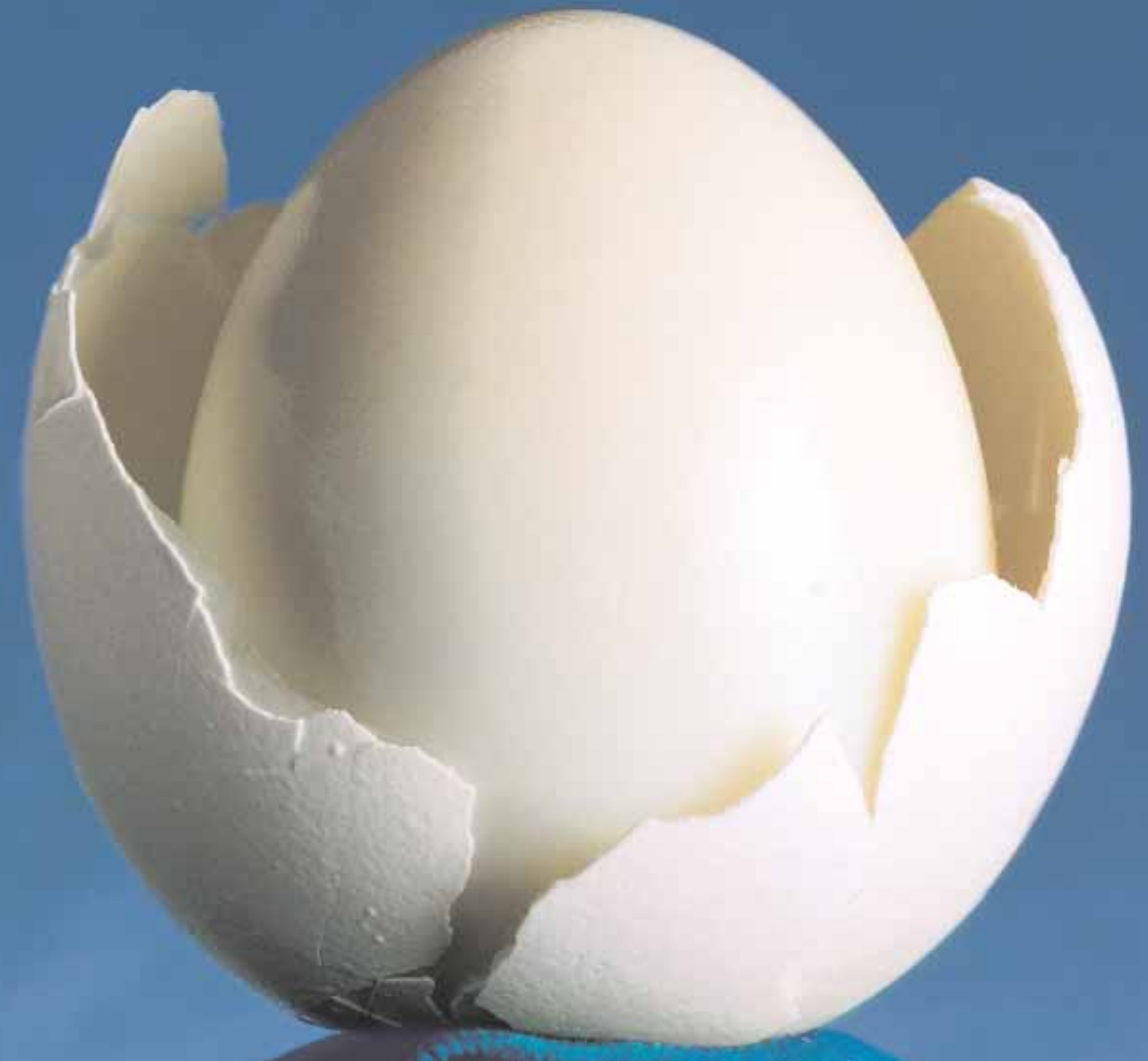


# EGG PRODUCTS REFERENCE GUIDE

**American Egg Board**  
847-296-7043

1460 Renaissance Drive, Park Ridge, Illinois 60068  
Fax: 847-296-7007 Email: [aeb@aeb.org](mailto:aeb@aeb.org)

[www.aeb.org](http://www.aeb.org)



The incredible edible egg™  
American Egg Board



A bright day for eggs

**TABLE 1.1** Assayed Egg Nutrient Values

NUTRIENTS (per 100g)	LIQUID*/FROZEN						DRIED		
	WHOLE EGGS	YOLK	SUGARED YOLK	SALTED YOLK	SALTED WHOLE EGGS	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
PROTEIN – g	12.0	15.3	13.9	14.1	11.0	9.3	48.4	33.7	84.6
MOISTURE – g	75.2	56.8	51.2	50.9	67.8	89.0	3.7	2.7	6.5
FAT – g (total lipid)	9.7	23.0	20.8	20.9	9.2	0.076	39.2	52.9	0.4
ASH – g	0.8	1.4	1.1	10.4	10.3	0.4	3.4	3.3	3.6
CARBOHYDRATE – g	2.2	3.6	13.0	3.8	1.7	1.3	5.4	7.3	4.8
CALORIES – cal	144.0	282.0	294.0	259.3	133.0	43.0	568.0	640.0	361.0
CHOLESTEROL – mg	400.0	991.0	917.0	912.0	387	3.3	1630	2307	20.0
TRANS FATS	0.11	0.24	0.18	0.16	0.09	0.02	0.35	0.63	<.004

USDA Nutrient Database for Standard Reference, Release 13 (November 1999).  
\*Nutrient values for liquid eggs may indicate a small variation from frozen eggs.

**fact 1.1**

According to a study conducted by Food Processing magazine and the American Egg Board (AEB), food processors prefer real eggs over alternatives. They know eggs perform multiple functions in food product formulations and keep ingredient statements short and clean.

# chemical composition



**TABLE 1.2** Egg Vitamins

VITAMINS (per 100g)	LIQUID*/FROZEN						DRIED		
	WHOLE EGGS	YOLK	SUGARED YOLK	SALTED YOLK	SALTED WHOLE EGGS	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
NIACIN – mg	0.10	0.03	0.04	0.03	0.08	0.09	0.34	0.08	0.77
RIBOFLAVIN – mg	0.52	0.56	0.52	0.43	0.44	0.42	1.98	1.26	3.71
B12 – mcg	1.16	1.64	1.64	1.61	1.21	<0.12	3.39	6.02	0.18
PANTOTHENIC ACID – mg	1.57	3.44	3.29	3.17	1.26	0.15	5.55	9.06	0.67
VITAMIN A – IU	488	1330	1433	1043	497	<100	500	973	<100
THIAMIN – mg	0.07	0.22	0.14	0.14	0.06	<0.01	0.18	0.39	<0.05
PYRIDOXINE (B6) – mg	0.197	0.442	0.398	0.402	0.226	<0.007	0.494	0.842	0.04
FOLIC ACID – mg	.087	0.151	0.174	0.112	0.0691	0.0091	0.119	0.209	0.022
VITAMIN E – IU	1.07	3.34	3.35	3.40	1.20	<0.50	3.24	7.17	<0.500
VITAMIN D – IU	<60	87.7	123.0	126.0	56.5	<60	125	75.1	<90
LUTEIN – mg	0.293	0.581	0.586	0.418	0.252	<0.02	0.572	0.737	<0.02
ZEAXANTHIN – mg	0.178	0.323	0.381	0.294	0.165	<0.02	0.263	0.396	<0.02

USDA Nutrient Database for Standard Reference, Release 13 (November 1999).  
\*Nutrient values for liquid eggs may indicate a small variation from frozen eggs.

**fact 1.2**

Many additional ingredients are required to substitute for the functionality of eggs in a recipe or formula. Contemporary consumers, however, are turned off by food labels displaying synthetic additives and unfamiliar ingredients.

Eggs are nature’s perfect food. Consumers’ growing interest in dietary health allows eggs, with excellent nutritional properties, to play a key role in the development of healthy and good-for-you food products.

Eggs have long been regarded as a beneficial ingredient for health and nutrition.

In fact, eggs perform multiple functions in making processed food products. And they simplify the ingredient statement.

**fact 1.3**

Eggs contain an insignificant amount of trans fat. Similar to some fats and oils, eggs impart a rich texture, mouthfeel, flavor, and color to prepared foods.

**TABLE 1.3 Egg Minerals**

MINERALS (per 100g)	LIQUID*/FROZEN						DRIED		
	WHOLE EGGS	YOLK	SUGARED YOLK	SALTED YOLK	SALTED WHOLE EGGS	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
CALCIUM – mg	62.6	133	124	113	113	10.1	236	307	104
IRON – mg	1.69	3.67	3.70	3.40	3.40	0.167	4.33	9.50	0.23
MAGNESIUM – mg	8.70	10.9	10.5	6.70	6.70	11.1	6.47	25.5	82
PHOSPHORUS – mg	193	420	404	414	414	13.1	629	1040	104
POTASSIUM – mg	135	121	105	111	111	169	540	264	884
SODIUM – mg	130	70.9	70.0	3487	3487	169	480	163	1014
ZINC – mg	1.32	3.17	3.06	2.87	2.87	0.070	3.15	7.73	0.135
COPPER – mg	<0.02	<0.02	<0.02	0.121	0.121	0.032	0.203	<0.05	0.128
MANGANESE – mg	0.032	0.078	0.080	0.065	0.065	<0.012	0.058	0.185	<0.03
SELENIUM – mg	0.037	0.0564	0.0535	0.0569	0.0569	0.0095	0.165	0.139	0.226

USDA Nutrient Database for Standard Reference, Release 13 (November 1999).  
 \*Nutrient values for liquid eggs may indicate a small variation from frozen eggs.  
 \*\*Selenium may vary in different areas of the U.S.

**fact 1.5**

Whole eggs and egg whites in particular, are frequently used in product formulations to help create smooth and creamy finished products. In addition to their own ability to aid browning, alkaline eggs can improve browning of acidic products — which ordinarily will not brown — by reducing their acidity.

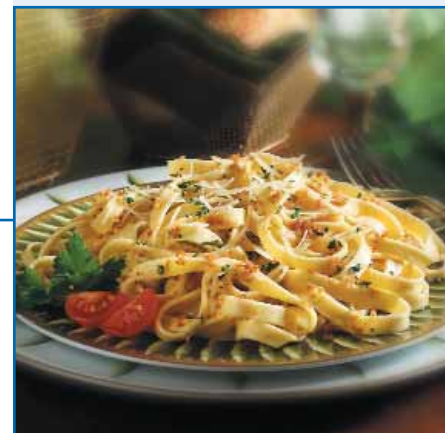


**chemical composition** *cont'd*

**TABLE 1.5 Egg Amino Acids**

AMINO ACIDS (mg/100g)	LIQUID*/FROZEN						DRIED		
	WHOLE EGGS	YOLK	SUGARED YOLK	SALTED YOLK	SALTED WHOLE EGGS	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
ALANINE – mg	700	800	703	710	607	600	2723	1757	5160
ARGININE – mg	790	1077	917	947	700	570	3090	2343	4920
ASPARTIC ACID – mg	1267	1483	1337	1333	1113	1057	5053	3320	9200
CYSTINE – mg	280	270	227	240	240	263	1077	590	2227
GLUTAMIC ACID – mg	1603	1917	1690	1697	1417	1350	6430	4277	11733
GLYCINE – mg	420	470	417	420	363	357	1633	1047	3067
HISTIDINE – mg	313	393	353	353	273	240	1210	863	2063
ISOLEUCINE – mg	643	770	697	697	560	510	2450	1707	4440
LEUCINE – mg	1080	1333	1180	1187	940	853	4177	2917	7407
LYSINE – mg	903	1167	1033	1033	793	693	3360	2477	5940
MENTHIONINE – mg	390	370	360	320	303	360	1503	860	3013
PHENYLALANINE – mg	657	680	607	610	577	600	2547	1477	5163
PROLINE – mg	483	607	547	550	420	373	1843	1330	3260
SERINE – mg	957	1283	1137	1133	727	3797	2823	6200	850
THREONINE – mg	540	697	627	620	483	413	2143	1550	3653
TRYPTOPHAN – mg	187	220	190	190	227	160	780	393	1437
TYROSINE – mg	520	673	507	597	463	407	1993	1427	3437
VALINE – mg	793	897	790	793	673	667	3010	1940	5763

USDA Nutrient Database for Standard Reference, Release 13 (November 1999).  
 \*Nutrient values for liquid eggs may indicate a small variation from frozen eggs.



**fact 1.4**

Eggs have a high nutrient density because they provide excellent protein and a wide range of vitamins and minerals in proportion to their calorie count.

**TABLE 1.4 Egg Lipids**

LIPIDS (per 100g)	LIQUID*/FROZEN						DRIED		
	WHOLE EGGS	YOLK	SUGARED YOLK	SALTED YOLK	SALTED WHOLE EGGS	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
SATURATED, TOTAL – g	3.34	7.92	7.11	7.15	3.18	-	13.50	18.13	-
14:0 MYRISTIC	0.046	0.112	0.11	0.08	0.04	-	0.14	0.20	-
16:0 PALMITIC	2.52	6.02	5.38	5.44	2.41	-	10.2	13.90	-
18:0 STEARIC	0.914	2.10	1.90	1.92	0.86	-	3.66	4.75	-
MONOUNSATURATED, TOTAL – g	4.22	9.79	8.88	9.06	4.00	-	17.10	23.7	-
16:1 PALMITOLEIC	0.257	0.625	0.55	0.57	0.27	-	0.77	1.60	-
18:1 OLEIC	4.11	9.50	8.63	8.82	3.86	-	16.9	22.90	-
20:1 EICOSENOIC	0.030	0.07	0.06	0.07	0.03	-	0.14	0.18	-
POLYUNSATURATED, TOTAL – g	1.77	4.24	4.03	3.74	1.61	-	6.86	8.76	-
18:2 LINOLEIC	1.47	3.67	3.30	3.21	1.38	-	5.96	7.56	-
18:3 LINOLENIC	0.036	0.098	0.09	0.09	0.03	-	0.12	0.19	-
18:4 MOROCTIC	-	-	-	-	-	-	-	-	-
20:4 ARACHIDONIC	0.192	0.448	0.42	0.41	0.18	-	0.73	0.94	-
20:5 TIMNODONIC (EPA)	<0.005	<0.01	<0.01	<0.01	<0.005	-	<0.01	<0.01	-
22:6 DOCOSAHEXAENOIC	0.054	0.135	0.13	0.12	0.05	-	0.19	0.25	-

USDA Nutrient Database for Standard Reference, Release 13 (November 1999).  
 \*Nutrient values for liquid eggs may indicate a small variation from frozen eggs.



**TABLE 1.6 Egg Chemistry** ①

LIQUID/DRY EGG PRODUCTS (per 100g)	LIQUID*/FROZEN			DRIED		
	WHOLE EGGS	YOLK	WHITE	WHOLE EGGS	YOLK	STABILIZED WHITE
SOLIDS	24.80	43.20	11.00	96.3	97.3	93.5
Ph ②	7.8	6.7	8.8	8.7	6.5	6.8
PROTEIN	12.0	15.3	9.3	48.4	33.7	84.6
LIPIDS	9.71	23.0	0.076	39.2	52.9	0.407
FREE GLUCOSE ②	<0.10	0.2	0.3	0.3	<0.1	0
ASH	0.80	1.4	0.4	3.4	3.3	3.6
MOISTURE	75.20	56.80	89.0	3.7	2.7	6.5

USDA Nutrient Database for Standard Reference, Release 13 (November 1999). \*Nutrient values for liquid eggs may indicate a small variation from frozen eggs. (1) Agricultural Research Service, USDA, 1994. (2) Dwight Bergquist and John Toney, "Functional Egg Products for the Cereal Food Industries," Cereal Foods World, Aug. 1983.

**TABLE 1.7 Eggs As Nutraceuticals** *cont'd*

**SIALIC ACID.** Shown to inhibit certain stomach infections.

**LIPOSOMES.** Used as a controlled delivery mechanism for various drugs.

**IMMUNOGLOBULIN YOLK (IGY).** An antibody found in egg yolks.

**EGG YOLK PROTEIN (PHOSVITIN).** Provides antioxidant benefits in food products.

**CHOLINE.** Is important in brain development.

**YOLK LECITHIN.** Has a high proportion of phosphatidylcholine. Egg lecithin contains 63% unsaturated fatty acids including Omega-3 acids, which have been shown to improve visual activity in infants and to improve fatty acid status.

**EGG WHITE LYSOZYME.** Is being marketed in pharmaceutical products and is used as a food preservative.

**SHELL MEMBRANE PROTEIN.** Used experimentally to grow human skin fibroblasts for severe burns. Also being used in Japan in cosmetics.



# chemical composition *cont'd*



**TABLE 1.7 Eggs As Nutraceuticals**

Eggs have been considered a functional food for decades, and there are discoveries to come. "Specialty" egg products, such as Omega-3 and Vitamin E-enriched eggs, offer the functionality of eggs plus important nutrients essential to health. Substances derived from eggs have key benefits.

Phospholipids	Concentration %
Phosphatidylcholine	80.5
Phosphatidylethanolamine	11.7
Lysophosphatidylcholine	1.9
Sphingomyelin	1.9
Neutral Lipids and Others	3.7



**fact 1.6**

Eggs are compatible in most food ingredient systems, blending without adverse reactions or difficulties.

**fact 1.7**

Eggs contribute valuable nutrients, from their high-quality protein to significant levels of beneficial vitamins, antioxidants, and other important nutrients all within one single ingredient.

**fact 2.1**

Egg products are available in a multitude of convenient, value-added forms to fulfill many functional needs from leavening, thickening, binding, coating, emulsifying, crystallization and moisture control.



**fact 2.2**

Careful processing assures manufacturers of high-quality, safe egg products. All egg products are pasteurized. High-speed automation carefully breaks and separates shells, yolks and whites.

**TABLE 2.1 Egg Product Categories**

SHELL EGGS	FURTHER PROCESSED	OTHERS
	REFRIGERATED LIQUID	PREPARATION
	FROZEN	EXTRACTIONS
	DRIED	SEPARATIONS
	SPECIALTY	
SMALL BAKERIES/ CANDIES	LARGER FOOD PROCESSORS	NUTRACEUTICALS

**TABLE 2.3 Refrigerated Liquid Egg Products**

<ul style="list-style-type: none"> <li>• Whole eggs, white or yolks</li> <li>• Sugared egg yolks</li> <li>• Salted whole eggs or yolks</li> <li>• Scrambled egg mix</li> <li>• Extended shelf life whole eggs, whites, yolks or scrambled egg mix</li> </ul>	
<b>USAGE:</b>	Foodservice and the commercial food processing industry.
<b>AVAILABILITY:</b>	Bulk tank trucks, totes, metal or plastic containers, polyethylene coated fiber or laminated foil and paper cartons and hermetically sealed polyethylene bags. Container size from small bags to cartons (8-oz to 5-lb), intermediate size bag in boxes and pails (20- to 40-lb) and larger drums and totes (200- to 3,500-lb).
<b>ADVANTAGES:</b>	Pasteurized, quick and easy to use.
<b>STORAGE/HANDLING:</b>	Store according to processor's recommendations. Normally should be used within six days, except for extended shelf life products for which the supplier's recommendations should be followed.

**fact 2.3**

Carbohydrates, gum, starches, sugar and salt may be added to improve functional performance and physical characteristics of refrigerated, frozen and dried egg products.

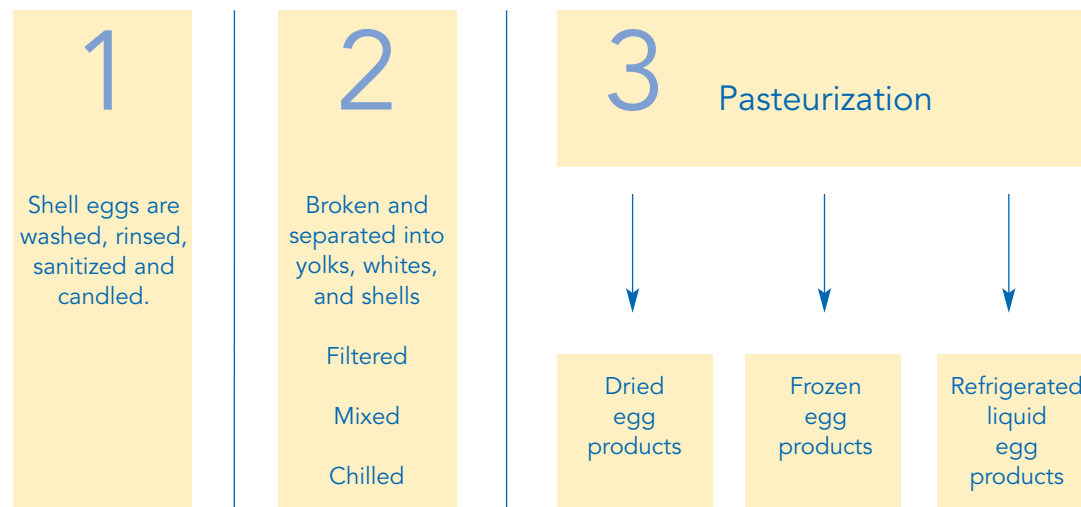


**fact 2.4**

Dried eggs add functionality to dehydrated and intermediate moisture products such as mixes and grain-based products.

**2.0 types of egg products**

**TABLE 2.2 Egg Processing Overview**



**TABLE 2.4 Dried Egg Products**

<ul style="list-style-type: none"> <li>• Whole eggs or yolk solids</li> <li>• Dried egg or scrambled egg mix</li> <li>• Egg whites</li> <li>• Free flowing whole eggs or yolk solids</li> <li>• Stabilized (glucose-free) whole eggs or yolk solids</li> <li>• Blends of whole eggs and/or yolk with carbohydrates</li> </ul>	
<b>USAGE:</b>	Ingredient especially for the commercial food processing industry.
<b>AVAILABILITY:</b>	Foodservice — 6-oz pouches, 3- and 25-lb poly packs Commercial — 25- and 50-lb boxes, 150-, 175-, and 200-lb drums
<b>ADVANTAGES:</b>	Long shelf life, stable and mixable.
<b>STORAGE/HANDLING:</b>	Keep in dry storage away from extreme temperatures and strong odors. Use pallets.



## fact 2.5

Refrigerated and frozen egg products can be used in any formula where shell eggs are required. Refrigerated egg products are easily integrated into manufacturing systems, including pumping and extrusion. Frozen egg products can be stored for long periods of time and used as needed.

### TABLE 2.5 Frozen Egg Products

<ul style="list-style-type: none"> <li>• Whole eggs, whites or yolks</li> <li>• Scrambled egg mix</li> <li>• Salted whole eggs or yolks</li> <li>• Sugared egg yolks</li> <li>• Whole eggs and yolks with corn syrup</li> </ul>	<ul style="list-style-type: none"> <li>• Whole eggs with citric acid</li> <li>• Whole eggs with corn syrup</li> </ul> <p><i>Note: Yolk products have salt, sugar or corn syrup added to prevent increased viscosity during freezing</i></p>
<b>USAGE:</b>	Ingredient especially for the commercial food processing industry.
<b>AVAILABILITY:</b>	30-lb container and 4-, 5-, 8-, 10-lb pouches or waxed plastic cartons.
<b>ADVANTAGES:</b>	Long shelf life, functionality, variety of blends.
<b>STORAGE/HANDLING:</b>	Keep frozen at below 10°F (-12°C). Thaw in refrigerator or set in cold running water. Use as soon as possible.

### TABLE 3.1 Typical Specifications

SPECIFICATION	SOLIDS						
	WHOLE		YOLKS		WHITES		
	PLAIN	FREE <sup>②</sup> FLOWING	PLAIN	FREE <sup>②</sup> FLOWING	SCRAMBLED EGG	SPRAY DRIED	PAN DRIED
MOISTURE - %	5.1 max.	3.0 max.	5.0 max.	3.0 max.	2.5 max.	8.0 max.	14 max.
TOTAL SOLIDS - %	-	-	-	-	-	-	-
CRUDE PROTEIN - %	47.35	45	34.25	33.57	34.3	81.1	74
TOTAL LIPIDS - %	40.95	40	55.8	54.68	36.5	<0.2	nil
pH	8.3±.3	8.3±.3	6.4±.3	6.4±.3	-	7.0±.5	5.5±.5
CARBOHYDRATES <sup>③</sup> - %	SOP	SOP	SOP	SOP	17	glu. free	glu. free
TOTAL MICROBIAL COUNT /g	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000	<10,000
YEAST /g	10 max.	10 max.	10 max.	10 max.	-	10 max.	10 max.
MOLD /g	10 max.	10 max.	10 max.	10 max.	-	10 max.	10 max.
COLIFORM /g	10 max.	10 max.	10 max.	10 max.	-	10 max.	10 max.
SALMONELLA /g	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
GRANULATION	100% USBS-16	100% USBS-16	100% USBS-16	100% USBS-16	-	100% <sup>⑤</sup> USBS-60	SOP
OTHERS <sup>⑥</sup>	-	-	-	-	-	-	-

## fact 3.1

Egg product processors work with manufacturers to meet specifications and special needs. Manufacturers should contact egg processors for specific requirements.



# 2.0 types of egg products *cont'd*

## Other Processed Egg Products

**Chopped hard-cooked, peeled eggs** — cryogenically frozen and used by salad bars in restaurants.

**Whole hard-cooked, peeled eggs** — plain, usually packed in a citric acid solution with sodium benzoate, or pickled in pickling solution.

**Frozen hard-cooked egg rolls or long eggs** — albumen cooked around a center core of egg yolk. Cryogenically frozen and used sliced for salads.

**Frozen quiche mixes**

**Frozen scrambled egg mix** — can be in boilable pouch.

**Freeze-dried, precooked scrambled eggs**

**Freeze-dried scrambled egg mix**

**Refrigerated liquid or frozen egg substitutes** — formulated from egg white to simulate whole eggs. The yolk is replaced with other ingredients such as non-fat dried milk, vegetable oils, emulsifiers, stabilizers, antioxidants, gums, artificial color, minerals and vitamins.

**Frozen, precooked products** — egg patties, fried eggs, crêpes, scrambled eggs, egg pizza, omelet, French toast, quiches, egg breakfast sandwiches.

# 3.0 specifications

### TABLE 3.1 Typical Specifications *cont'd*

SPECIFICATION	LIQUID OR FROZEN		
	WHOLE	YOLK <sup>①</sup>	WHITE
MOISTURE - %	-	-	-
TOTAL SOLIDS - %	24.2	43.0	11.45
CRUDE PROTEIN - %	11.95	15.5	9.8
TOTAL LIPIDS - %	10.2	25.6	nil
pH	7.3±.3	6.2±.1	8.9±.3
CARBOHYDRATES <sup>③</sup> - %	1.05	1.15	1.05
TOTAL MICROBIAL COUNT /g	<5,000	<5,000	<5,000
YEAST /g	10 max.	10 max.	10 max.
MOLD /g	10 max.	10 max.	10 max.
COLIFORM /g	10 max.	10 max.	10 max.
SALMONELLA /g	Neg.	Neg.	Neg. <sup>④</sup>
GRANULATION	-	-	-
OTHERS <sup>⑥</sup>	-	-	-

① Egg yolks contain 17% egg white; natural egg yolk contains about 43% solids; with added ingredients 48% by weight.

② Free flowing products contain less than 2% sodium silicoaluminate.

③ Most egg white solids are desugared. Whole egg and yolk products are desugared if specified on purchase (SOP).

④ Negative by USDA approved testing procedures.

⑤ U.S. Bureau of Standards.

⑥ Additives and performance specifications may be specified on purchase.



**TABLE 4.1 Egg Functions**

FUNCTION	DESCRIPTION	APPLICATIONS
Adhesive Properties	Adheres ingredients such as seeds and grains to food products.	Health bars, Variety breads, Snacks
Aeration and Structure Improvement	Egg proteins create foam in products resulting in lighter and airier products.	Meringues, Mousses, Souffles
Binding	Egg proteins provide the structure and coagulative properties to bind food products together.	Snack foods, Meat products, Prepared entrées
Browning	Provides desirable brown color to baked products.	Rolls and buns, Variety breads
Clarification	Egg whites inhibit enzymatic browning and prevent cloudiness in beverages.	Wines, Juices
Coagulation and Gelation	Egg white and yolk proteins change from a fluid state to gel.	Cakes and frostings, Custards, Fish surimi
Coating	Locks in flavor and aroma.	Baked goods, Snacks
Color	Xanthophyll pigments in egg yolk contribute yellow color to many foods.	Baked products, Noodles, Custards
Crystallization Control	Egg white proteins prevent crystallization of sugar and promotes smoothness of chocolate.	Confections

**TABLE 5.1 Egg Issues**

ISSUE	MISCONCEPTION	FACT
SALMONELLA	Eggs pose a serious risk of foodborne illness due to salmonella contamination.	Eggs used in processed foods are from further processed eggs which are pasteurized and free from salmonella. Keep in mind that proper food handling is still important with further processed eggs.
CHOLESTEROL	For many years, consumers and the media have viewed eggs as a high cholesterol food associated with high blood cholesterol levels.	Studies have shown that saturated fat, not dietary cholesterol from eggs, is the real culprit. Most healthy people can include eggs in their diet.
EGG SUBSTITUTES AND REPLACERS	Food processors sometimes believe that ingredients provide better functions than real eggs in formulations.	Eggs provide superior polyfunctional properties. Food processors find that replacers do not function as well as real eggs in various food applications. Often a replacer provides one function only. For example, the substitute may act as a foaming agent but exhibits poor coagulative properties.

**fact 5.1**

*While the public has been bombarded with information — and often misinformation — about health, nutrition and food safety, the egg industry continues to build a positive base of information on eggs.*



**egg functions**



**egg issues**

**TABLE 4.1 Egg Functions *cont'd***

Emulsification	Phospholipids and lipoproteins serve as surface active agents stabilizing oil in water emulsions.	Salad dressings, Sauces
Finish/Gloss	Used universally in baking to improve product appearance. Egg wash gives surface gloss and shine.	Sweet breads, Cookies, Frostings
Flavor	Carries and enhances some flavors, and imparts desirable egg flavor.	Custards, Confections
Freezability	Improves texture and acceptability of products going through freeze/thaw cycle.	Frozen doughs, Microwavable food
Humectancy	Holds moisture in food products to help increase shelf life.	Variety breads, Rolls
Insulation	Keeps products from turning soggy.	Breads, Frozen doughs
Mouthfeel Improvement	Provides substantial body and smoothness to foods.	Variety breads, Sweet goods, Puddings
pH	Stable pH.	Won't disrupt food product formulations
Shelf Life Extension	Keeps starch molecules moist and fresh.	Commercial bread formulations
Tenderization	Tenderizes foods naturally giving a soft surface feel.	Soft breads, Rolls
Texture Improvement	Firms up the texture of food products and provides crumb improvement.	Rolls, Light foods
Thickening	Thickens sauces, gravies and adds body to achieve product improvement.	Sauces, Toppings, Prepared foods

**fact 4.1**

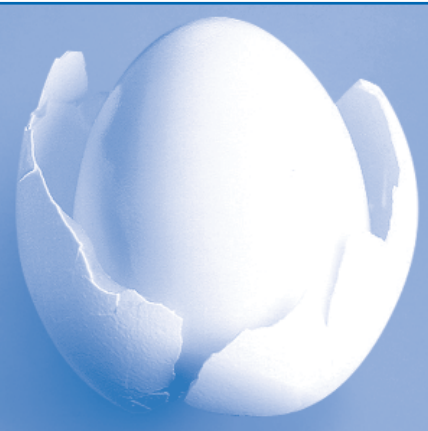
*Eggs can perform more than twenty distinct functions in the making and processing of food — many of which can only be duplicated by the substitution of multiple additives and ingredients.*





## What can the American Egg Board do for you?

The American Egg Board (AEB) is the U.S. egg producers' communications link to consumers and food processors. AEB concentrates on conveying the many uses for the "incredible edible egg.™" As the egg industry's promotional organization, AEB works to educate the American public that the egg is still one of nature's most perfect foods. It's our mission to help improve the demand for shell eggs, egg products, and spent fowl.



Some of the American Egg Board programs include:

- National advertising campaign, including television and radio spots.
- Public information on egg research and nutrition; education coordination with the Washington, DC-based Egg Nutrition Center.
- Activities such as workshops and industry seminars to educate, assist and encourage food processors to continue and increase usage of egg products in manufactured foods.
- Assistance in formulation development.

For more information about American Egg Board promotional efforts and activities, or facts on egg products, nutrition, technical specifics and formulas, visit our Web Site, [www.aeb.org](http://www.aeb.org).

