Understanding Food Labels
Part II: The Ingredient Statement

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Food Labels Can Be Confusing...

But Ingredient Statements look like they’re written in a foreign language! Essentially, they are. It’s the language of food scientists, chemists, and processors, and even for these professionals it can be difficult to fully interpret.

Below are the ingredients for a pound cake, as you would expect to see them in a recipe or cook book:

- 3 large eggs
- 3 tablespoons milk
- 1½ teaspoons vanilla extract
- 1½ cups flour, sifted
- 1 teaspoon baking powder
- ¼ teaspoon salt
- ¾ cup granulated sugar
- ½ cup butter, softened
- ⅓ cup shortening

Now consider how that list might look on a food label:

**Ingredient Statement:** Enriched bleached flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), eggs, sugar, butter (cream, salt), shortening (soybean oil, fully hydrogenated palm oil, partially hydrogenated palm and soybean oils, mono and diglycerides, TBHQ and citric acid [antioxidants]), leavening (sodium acid pyrophosphate, baking soda, calcium monophosphate), vanilla (natural flavor), salt.

The Food and Drug Administration (FDA) has specific requirements for Ingredient Statements that all processors must follow:

- Ingredients must be listed by weight, from highest to lowest.
- Any “multi-component” ingredients must be followed by their own list of individual ingredients (see flour in the previous example). Alternately, the individual ingredients can be merged into the main Ingredient Statement.
- Colors and flavors should be identified as “natural” or “artificial”. For artificial colors, this is done by listing the FD&C number.
- Leavening agents should be identified.
- Preservatives should be identified by giving an explanation of their function in the food.

The FDA has these requirements so consumers can know exactly what is in their food. What it doesn’t tell us, though, is Why.

**DID YOU KNOW?**

There are over 3,000 food additives approved by the FDA! Some of them might look familiar. Most will not. Several can be used at the discretion of the food manufacturer. Others are closely regulated, and can only be used in certain types of products and at specific levels. The FDA maintains a database of these additives called “Everything Added to Food in the United States,” or EAFUS for short. Additives are listed alphabetically, along with the sections of the Code of Federal Regulations that apply.

To access the database, visit [www.fda.gov](http://www.fda.gov) and search “EAFUS.”
This table summarizes some common situations when additives are used, but there are many other uses as well. For more information, visit [www.fda.gov](http://www.fda.gov) and search “Food Ingredients and Colors.”

<table>
<thead>
<tr>
<th>Why Additives Are Used</th>
<th>Types of Additives and What They Do</th>
<th>Ingredients Commonly Found in Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>“To maintain product consistency”</td>
<td>• Emulsifiers to keep products from separating&lt;br&gt;• Thickeners to give products body&lt;br&gt;• Anti-caking agents to keep powders from clumping</td>
<td>• Mono- and diglycerides, lecithin&lt;br&gt;• Alginate, pectin, gelatin, gums (e.g., xanthan, guar), modified starch&lt;br&gt;• Magnesium silicate, calcium stearate, cornstarch</td>
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<td>“To improve or maintain nutritional value”</td>
<td>• Vitamins&lt;br&gt;• Minerals&lt;br&gt;• Chelators to make minerals easier to absorb</td>
<td>• Vitamin C, thiamin, folic acid, niacin&lt;br&gt;• Iron, calcium, magnesium&lt;br&gt;• EDTA, potassium phosphate, sodium diacetate</td>
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<tr>
<td>“To maintain palatability and wholesomeness”</td>
<td>• Antimicrobials to prevent mold or yeast growth&lt;br&gt;• Antioxidants to protect color and flavor</td>
<td>• Propylparaben, sodium benzoate, sodium propionate&lt;br&gt;• BHA/BHT, TBHQ, propyl gallate, ascorbic acid</td>
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<td>“To provide leavening or to control acidity/alkalinity”</td>
<td>• Acidulants to lower the pH&lt;br&gt;• Buffers / Acidity controllers to prevent the pH from changing&lt;br&gt;• Leaveners to give volume to baked goods</td>
<td>• Citric acid, malic acid, fumaric acid, acetic acid&lt;br&gt;• Calcium citrate, phosphates, sodium carbonate&lt;br&gt;• Sodium bicarbonate (baking soda), calcium phosphate, sodium acid pyrophosphate, glucono-d-lactone</td>
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<tr>
<td>“To enhance flavor or impart desired color”</td>
<td>• Sweeteners&lt;br&gt;• Non-nutritive sweeteners for low calorie products&lt;br&gt;• Flavor enhancers&lt;br&gt;• Natural colors&lt;br&gt;• Artificial colors (only approved artificial colors can be used)</td>
<td>• Corn syrup, sugar, fructose&lt;br&gt;• Aspartame, acesulfame K, stevia, saccharin, sucralose&lt;br&gt;• Monosodium glutamate (MSG), salt, disodium inosinate&lt;br&gt;• Annatto extract, caramel, carmine, paprika, turmeric&lt;br&gt;• Blue 1 &amp; 2, Green 3, Red 2, 3 &amp; 40, Yellow 5 &amp; 6</td>
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References: