

What is Gluten?

Gluten is a general term used to reference certain types of proteins. Edible grass crops disperse fruit and seeds in a form called cereal grains. Cereal grains contain all three of the energy contributing nutrients including fat, carbohydrates, and protein. If you take a cereal grain and remove the bran (the outer shell), one key component of the grain left is a starchy tissue call the endosperm. The endosperm contains protein, with protein levels ranging between 5-15%. The cereal grain may also contain the germinating embryo of the seed, call the germ, which contains even higher protein levels, typically ranging within 40-50%.

All proteins are made up of amino acids, and the collective level of each amino acid can vary depending upon the protein source. Gluten is made up of a protein cultivated out of a certain family of grasses, the triticeae botanical tribe. The proteins from this grass tribe tend to have higher levels of proline, one non-essential amino acid. When these protein types combine with each other and water, they have natural elasticity. If you experience a gluten rich bread that is very chewy, that is thanks to the contribution of this protein, or “gluten”.



Can I make a gluten free claim?

Yes, The Food Source International can definitely work with you in supporting a gluten free claim. We ask that you communicate all claims (such as gluten free) in the early stages of a project. As the product is being formulated, TFS can plan for the additional steps necessary in order to support the claim, understand the planning parameters needed to assure that claim, and effectively communicate this information to all the relevant parties.



Who needs to avoid gluten?

A gluten free diet is becoming more and more common. A person may adopt a low or gluten free diet for one of the following reasons:

- **Celiac Disease:** Coming from a genetic predisposition, a person may have celiac disease. In this case, the body’s immune system has a response to the gluten that the person has consumed, reacting as if that protein is a virus. The body responds by producing antibodies, resulting in much discomfort. Skin irritation can also be associated with gluten exposure.
- **Allergens:** A person may have an anaphylaxis response to wheat protein, again as a result of an immune system response. An individual may decide to collectively avoid gluten as an assurance of avoiding an allergy such as wheat.
- **Gluten Intolerance:** Some individuals find that their digestive systems have difficulty breaking down a protein with strong elastic properties. This can cause digestive discomfort in which an individual may choose to reduce or eliminate gluten from the diet.



What are the standards for a gluten free claim?

You may have noticed an increasing number of products on the market commercialized with a “gluten free” claim, so much so that government regulation and 3rd party certification markets have developed in order to standardized rules for this claim. If you plan to make a gluten free claim, you should be aware that the levels and standards for your claim can vary:

- FDA: in 2013 the FDA published guidance for food manufacturers in making a gluten free claim. Within that regulation, a product cannot contain the claim “gluten free” if test results show a presence of gluten at levels greater than 20ppm.
- GIG: The GIG (Gluten Intolerance Group) is a commonly used third party certifier for a gluten free claim. Within the GIG standard, a product cannot be gluten free certified if test results show a presence of gluten at levels greater than 10ppm.



What are the challenges for a gluten free claim?

The Food Source International has also observed that ingredient sourcing and testing to be important and necessary if a seasoning is going to be used in a final product with a gluten free claim. While many products are inherently gluten free, a number of factors can contribute additional risks, increasing the likelihood of a positive gluten test, and exceeding the standards needed to support the gluten free claim. These factors may include anemophily (wind related pollination) or farm level cross contamination. TFS has observed a higher risk existing for leafy herbs as well as convention ingredients, which may not be cultivated under the same level of controls that organic ingredients may be. However, a general risk of gluten can and will exist in any seasoning.

For this reason, TFS may work with a customer to include additional testing steps in order to mitigate the risks associated with gluten. Please work with TFS as we try to communicate any cost, time, and planning needed, and account for these factors in the final product.



Who do I contact for questions?

If you do not know who your representative is, we have listed below our general contact information. Please feel free to call or email, and someone from The Food Source International will respond to your question.

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