

Frequently Asked Questions about Wheat Starch and the Gluten-Free Diet

What Is Wheat Starch? Does it Contain Gluten?

- The FDA considers wheat starch an “ingredient processed to remove gluten.” While wheat starch is not wheat grain or wheat protein, it is difficult to completely separate wheat starch from the protein in a grain of wheat. Research shows that a small amount of gluten remains in wheat starch. Depending on how it is processed, the amount of gluten varies.^{1,2}
- Some products made with wheat starch that are NOT labeled gluten-free contain very high amounts of gluten. A recent study found wheat starch to contain from < 5 parts per million (ppm) of gluten to over 10,000 ppm of gluten.²
- Wheat starch is not generally used in gluten-free foods in the United States.¹ Here’s a brief article that reviews possible reasons for this:
<https://www.glutenfreewatchdog.org/news/happy-wheat-starch-isnt-used-in-more-gluten-free-foods-you-may-have-ener-g-foods-elaine-hartsook-to-thank/>
- Wheat starch used in labeled gluten-free foods has been specially manufactured to contain extremely low amounts of gluten protein.

What Does the Food and Drug Administration (FDA) Say About Wheat Starch?

- Foods containing wheat starch that are labeled gluten-free and sold in the United States must contain <20ppm of gluten.³
- Foods labeled gluten-free that include the word “wheat” in the ingredients list or “Contains” statement must also include the statement *“The wheat has been processed to allow this food to meet the Food and Drug Administration requirements for gluten-free foods.”*³

Are There Issues with Testing Foods Made with Wheat Starch?

R-biopharm, a leading testing company for gluten, recommends that manufacturers who use wheat starch in their products should ensure that:

- The wheat starch is represented by the supplier as gluten-free and contains < 20 ppm of gluten.⁴

- The wheat starch is tested using both the sandwich and competitive R5 ELISA tests.⁴

(The sandwich ELISA detects intact or relatively intact gluten protein. The competitive R5 ELISA detects gluten even if it has been partially broken down into smaller protein fragments.)

- In addition, the gluten content in wheat starch may be underestimated. This is related to the current limitations of testing wheat starch for gluten.^{1,5}

Are Products with Wheat Starch Safe For Me to Eat?

- Gluten Free Watchdog, an independent gluten testing program, recommends that individuals with celiac disease or gluten related disorders avoid products containing wheat starch.
- If you choose to eat gluten-free foods made with wheat starch, Gluten Free Watchdog recommends only selecting products: ^{1,5}
 - if they are labeled “gluten-free.”
 - if the manufacturer and/or supplier test wheat starch for gluten using both the sandwich and competitive R5 ELISAs.

I have seen foods in Europe that contain wheat starch labeled “very low gluten”. What does this mean?

- In Europe, wheat starch has been used in gluten-free foods for years. Foods containing wheat starch sold in Europe may be labeled gluten-free if they contain no more than 20 ppm gluten.⁶
- In some European countries, foods may be labeled “very low gluten” if they contain greater than 20 ppm gluten up to 100 ppm gluten.⁶ Some of these “very low gluten” foods may contain wheat starch.
- However, under U.S. FDA rules, the phrase “low gluten” or “very low gluten” is not defined, and does **not** mean the same thing as gluten-free. **Those with celiac disease and other gluten-related disorders SHOULD NOT eat foods labeled “low gluten” or “very low gluten.”**
For more information on “very low gluten” foods, please see <http://www.glutenfreedietitian.com/newsletter/european-union-gluten-free-regulation/>

Takeaway Points:

- The gluten content of wheat starch varies depending on how it is processed..

- Wheat starch used in foods labeled gluten-free must be specially processed so that the food contains < 20 ppm gluten.
- There are limitations around testing wheat starch for gluten. Current testing methods are not perfect.
- Gluten Free Watchdog recommends eating foods containing wheat starch **only** if they are labeled “gluten-free” **and** if the manufacturer and/or supplier are testing wheat starch for gluten using both the sandwich and competitive R5 ELISAs.

Resources for You:

Thompson T, Celiac Disease Nutrition Guide. Academy of Nutrition and Dietetics, 3rd ed Chicago, IL, 2014.

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<https://www.ncbi.nlm.nih.gov/pubmed/11762742>

References:

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