



AgraStrip® Gluten Lateral Flow Test Kit

Recent discussions about celiac disease have led from the concept of "gluten detection" to "detection of potential relative toxicity of gluten" for the safety of celiac food consumers. For this reason the **AgraStrip® Gluten** using the G12 antibody was developed to specifically measure the fraction present in gluten which is toxic for celiac disease patients. The **AgraStrip® Gluten** is a rapid lateral flow assay test kit for screening food samples for gluten.

The G12 antibody is a new generation antibody that targets the toxic fragment that triggers the auto-immune reaction in celiac patients. The G12 antibody used in AgraStrip® Gluten was raised against the QPQLPY peptide from toxic fragment called 33-mer with peptide structure of LQLQPFQPQLPYQPQLPYQPQLPYQPQLPY of the gliadin protein present in gluten.

Summary:

- **G12 antibody was raised against QPQLPY peptide (from 33mer) that triggers the immune response in celiac patients.**
- **G12 recognizes the toxic fraction of gliadin**
- **G12 is recommended for hydrolyzed food where the gliadin protein is degraded**

There is an ongoing debate concerning the presence or absence of gluten in oats. In fact, current antibodies were not recommended for the detection of gluten in oats. The G12 antibody has shed light on this debate due to its specificity for the potentially toxic sequences present in oats. This is a more sensitive and selective method of testing compared to other techniques. In this regard, the Spanish Celiac Association has recently awarded the 6th National Prize for Research on Celiac Disease to a scientific team that used the G12 antibody to identify oat varieties containing low levels of gluten.

The **AgraStrip® Gluten** (Order No. COKAL0225AS) is a lateral flow test kit containing 25 strips, sample dilution solution, positive and negative control.

Benefits:

- Specific – monoclonal antibody detecting peptide sequences from gluten
- Sensitive – Limit of detection 15 ng/mL gliadin
- Customized – different cutoff levels due to different sample dilutions available
- Accurate – results are comparable with ELISA methods
- Rapid – 15 minutes assay method
- Stable – 12 months shelf-life
- Cost Effective – no expensive equipment needed
- User Friendly – easily train technicians in minutes

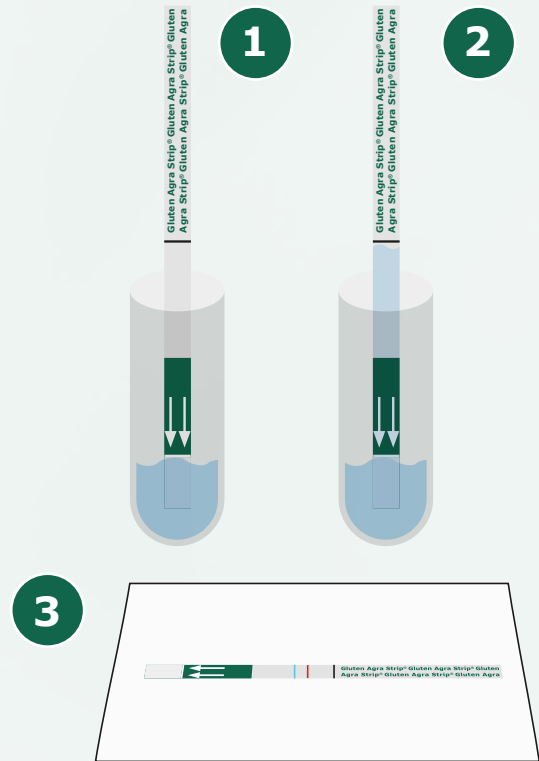
Procedure for AgraStrip® Gluten

IMPORTANT: Please read kit insert before running the test.

For sample extraction and dilution please refer to package insert or special applications.

Assay procedure:

1. Dip the strip test vertically in the test tube or vial containing the diluted sample without exceeding the immersion limit indicated by the arrows.
2. Wait for the liquid to reach the control zone.
3. Remove the strip from the test tube or vial and place it on a non-absorbent surface, preferably in a vertical position.
4. Read results after 10 minutes.

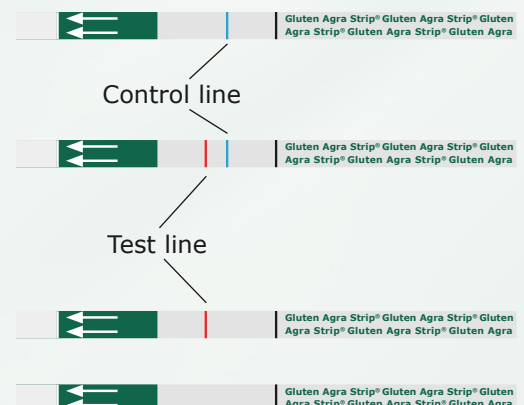


Result Interpretation

Negative result: One single blue line in the central part of the strip.

Positive result: One blue line and one red line in the result zone.
The sample contains gluten higher than the cutoff level (variable according to sample dilution)
NOTE: The intensity of the red colored test line may vary depending on the concentration present in the sample.

Invalid result: No blue line appears.



References:

Structural basis for gluten intolerance in celiac sprue

Shan L, Molbergv Ø, Parrot I, Hausch F, Filiz F, Gray GM, Sollid LM, Khosla C. Science. 2002 Sep 27;297(5590):2275-9.

Toward the assessment of food toxicity for celiac patients: characterization of monoclonal antibodies to a main immunogenic gluten peptide.

Morón B, Bethune MT, Comino I, Manyani H, Ferragud M, López, MC, Cebolla A, Khosla C, Sousa C. PLoS ONE. 2008 May 28;3(5):e2294.

Sensitive detection of cereal fractions that are toxic to celiac disease patients by using monoclonal antibodies to a main immunogenic wheat peptide.

Morón B, Cebolla A, Manyani H, Alvarez-Maqueda M, Megías M, Thomas Mdel C, López MC, Sousa C., Am J Clin Nutr. 2008 Feb;87(2):405-14.

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