

# GlutenTox<sup>®</sup> Home

**Quick test for the detection of gluten in food, beverages and oral hygiene products**

Cat. No. KT-5472 / KT-5000

Ed.2 - March 2013

## 1. Product Description

GlutenTox<sup>®</sup> Home is an immunochromatographic test for the detection of gluten in food and beverages. GlutenTox<sup>®</sup> Home can also be used for detecting the presence of gluten in oral hygiene products.

The test consists of an extraction stage using a simple procedure which is common to all types of food. The detection step is based on the reaction of the immunotoxic fractions of gluten in the sample with the colored conjugates (monoclonal anti-gliadin 33mer antibody / red colored microsphere) previously fixed on the stick. This complex spreads by capillarity through the stick. If the result is positive, a RED line appears in the result zone of the stick. The absence of the RED line indicates a negative result. Whether or not gluten is present, the mixture of the conjugate moves through the stick up to the control region where antibodies have been immobilized. If the test is properly realized a BLUE line (control line) will appear.

These rapid tests are especially useful in determining the sources of suspected gluten contamination. They can be used in the home or while traveling, and are also suitable for commercial kitchens to verify the safety of dishes intended for gluten-free customers.

## 2. Sensitivity/Specificity

- The detection limit is 5 ppm of gluten after.
- Specific to the toxic fraction of prolamins of wheat (gliadin), barley (hordein), rye (secalin) and oat (avenin).
- No cross-reactivity is observed with soy, rice and corn.

## 3. Kit components

### GlutenTox<sup>®</sup> Home 2 units (KT-5472)

- GlutenTox<sup>®</sup> Home stick (x2) and plastic pipette (x2) contained in metallic envelope.
- Disposable plastic spoons (x2).
- Extraction bottle with yellow cap (x2).
- Disposable plastic pipette (x2).
- Dilution bottle with blue cap (x2).
- Instructions leaflet.

### GlutenTox<sup>®</sup> Home 5 units (KT-5000)

- GlutenTox<sup>®</sup> Home stick (x5) and plastic pipette (x5) contained in metallic envelope.
- Disposable plastic spoons (x5).
- Extraction bottle with yellow cap (x5).
- Disposable plastic pipette (x5).
- Dilution bottle with blue cap (x5).
- Instructions leaflet.

## 4. Storage/Expiry

The product must be stored at a temperature ranging from 2°C to 30°C / 35.6°F to 86°F. To obtain optimal test performance, the product must be stored in its original packaging, and used before expiration date printed on the envelope. The envelope with the sticks should not be opened until its time of use. All components of the kit are fully disposable in ordinary trash or recyclable where appropriate.

## 5. Precautions and safety

- To avoid contaminations that interfere with the analysis, the use of non-powdered disposable gloves is recommended. If you do not have disposable gloves, wash your hands thoroughly before the test.
- Once the GlutenTox<sup>®</sup> Home stick has been removed from the envelope, it must be used as soon as possible under strict clean conditions.
- Do not use any material from the kit after the expiration date.
- Do not drink any solution (liquid) from the kit (the extraction solution contains alcohol [ethanol]).
- Keep out of reach of children.

## 6. Applications

- Easy: does not require any lab equipment and can be used by non-specialists.
- Suited for food that is not labeled or homemade.
- Very useful to test food at home, in restaurants, in school canteens, hospital kitchens or while traveling.

## 7. Validation

To ensure the test's ability to analyze a wide range of samples of different types, different commercial samples have been tested. After analyzing the samples with GlutenTox® Home in all types of matrices the results were satisfying and consistent with the validated method for the Codex Alimentarius, which demonstrates that the test can be used on a broad range of samples.

Group	Tested samples
Flour and semolina	Corn flour, precooked corn flour, corn semolina, rice flour, wheat flour, buckwheat flour
Milk products	Cow milk, milk with soluble fiber, milk with cereals, natural or flavored yogurt, cheese spread, shredded cheese blend
Baked and cereal products	Toast, bread stick, biscuits (rich tea), chocolate cookies, Madeleine, cake, cornflakes, pastas, corn pancakes, rice cakes, spelt cake, snacks
Meat products	Minced turkey, minced chicken, turkey sausage, chicken nuggets, pork sausages, chorizo
Fishery products	Cod and hake
Vegetables	Lettuce mix, fried vegetables
Broth, soups, creams and dry mixes	Vegetable broth, chicken rice soup, dehydrated vegetable soup, stock cubes, vegetable soup, peanut butter
Sauces, dressing, spices and condiments	Yogurt salad dressing, ketchup, soy sauce, salad dressing, garlic powder, paprika powder, cooking cream
Sugars	Glucose syrup, powdered sugar
Prepared meals and dishes	Meatballs in sauce with peas, Meat Ravioli in Egg Dough, bean stew
Fatty foods	Olive oil, sunflower oil, butter, margarine, cream
Acidic foods	Tomato sauce, wine vinegar, apple cider vinegar, lemon juice
Beverages	Water, milk, fruit juices, beer, soy drinks, rice drinks, oat drinks, soft drinks
Oral hygiene products	Toothpaste, mouthwash

## 8. References

1. SHAN L., et al.; "Structural basis for gluten intolerance in celiac sprue"; Science; 2002; 297: 2275-9.
2. COMINO I., et al.; "Diversity in oat potential immunogenicity: basis for the selection of oat varieties with no toxicity"; Gut; 2011; 60:915-922.
3. MORON B., et al.; "Sensitive detection of cereal fractions that are toxic to celiac disease patients by using monoclonal antibodies to a main immunogenic wheat peptide", 2008; 87:405-414.
4. SIGLEZ M.A., et al.; "Método de detección de gluten en superficies"; Alimentaria; 2010; 411:67-70.