



QUANTUM T2-HT2 GREEN

LATERAL FLOW TEST KIT

for the quantitative detection of T2 &HT2 in grains and cereals.

This Lateral Flow test kit is manufactured by Prognosis Biotech S.A.

ProGnosis Biotech S.A. is ISO 9001:2015 certified by TÜV Hellas (TÜV NORD).

Use only the current version of Product Data Sheet enclosed with the kit.

Quantum T2-HT2 Green, G8018/G8040, is a Lateral Flow Test kit for the quantitative determination of T2 & HT2 in grains and cereals.

This kit contains all reagents required for 18 or 40 reactions

Matrices:

Type I: Corn, corn flour, barley, rice, brown rice

Type II: Wheat

Type III: Quantify samples that exceed 400ppb of T2HT2

- **Results in 2 minutes**
- Total test time: 4 minutes
- Range: 0 - 400ppb Type I & Type II
0 - 3000ppb Type III
- Shelf life: 12 months
- Storage: 2-8°C



This is an electronic version, please verify always the last one included in the kit.

Specifications

- The LOD of the method is: 20ppb (Type I), 10ppb (Type II), 200ppb (Type III)
- The LOQ of the method is: 30ppb (Type I), 15ppb (Type II), 300ppb (Type III)
- Cross-reactivity: The cross-reaction of the anti-T-2 antibody with HT-2, T-2 Triol and T-2 Tetraol is 80, 3.7 and <0.1% respectively.

1. Description

Quantum T2-HT2 Green is an innovative Lateral Flow device, utilizing state-of-the-art features for the quantitative detection of T2 &HT2 in grains and cereals. This Lateral Flow test utilizes an ecological solution for the extraction step, instead of the usual organic solvents.

2. General Information

T-2 and HT-2 toxin belong to the group of trichothecenes. This group of mycotoxins are produced mainly by fungi of the genus Fusarium which is toxic to humans and animals. Agricultural commodities are frequently infected by this fungus. It is frequently implicated in cytotoxic and immunosuppressive disorders of farm animals and occasionally in pathogenetic syndromes in humans. Both in man and in animals T-2/HT-2 toxins can cause alimentary toxic aleukia. Most controlling government agencies worldwide have regulations or recommendations regarding the amount of T-2/HT-2 allowable in human and animal food-stuffs. Accurate and rapid determination of T-2/HT-2 presence in commodities is of paramount importance.

3. Principle of the Method

The Quantum T2-HT2 Green lateral flow test is based on the competitive format immunoassay principle. A capture line for T2 is placed below the control line. The detection system consists of specific antibodies against T2 & HT2 conjugated to colloidal gold. During testing, the sample flows through the membrane carrying along the detection system and passes through the two lines. If the sample is free of T2-HT2, a color development occurs at the test line, indicating the absence of T2-HT2 in the sample. On the contrary, the presence of T2-HT2 in the sample will cause a reduced colored signal at the test line. The test line color intensity is indirectly proportionate to the concentration of T2-HT2 present in the samples. A valid test should always have the upper control line red.

4. Reagents Provided

Quantum T2-HT2 Green kit contains sufficient reagents and materials for 18/40 measurements.

- 18/40 tests (cassette format) in foils
- 18/40 Extraction Powder pouches
- High range solution (product specific)
- Instruction manual

5. Materials required but not provided

- A grinder sufficient to render sample to particle size of fine instant coffee
- Balance with 0 - 50g measuring capability and Graduated cylinder - 50ml
- Deionized water
- Tube roller or Vortex mixer
- Mini centrifuge (spin) and plastic tubes 1,5 or 2ml
- 100 or 200µl adjustable micropipettes with disposable tips
- **S-Flow** software along with matching scanner device

6. Storage Instructions

Store kit components between 2 - 8°C. Do not freeze any components provided. The expiry date of the kit and reagents is stated on their labels and no quality guarantee is accepted after the expiration date. The expiry of the kit components can only be guaranteed if the components are stored properly and the reagent is not contaminated due to prior handling. Do not interchange individual components between kits of different lot numbers.

7. Safety and Precautions for use

All reagents should be brought to room temperature (21 - 25°C) before use (at least half an hour) and covered when not in use. Use a clean disposable plastic pipette tip for each reagent, to avoid cross contamination.

8. Sample preparation

a. Preparation of samples containing up to 400ppb.

1. The sample must be collected according to established sampling techniques. Grind a representative sample to the particle size of fine instant coffee (85-95% passes through a 20 mesh screen).
2. Weigh out a 10g ground portion of the sample
3. Add the content of 1 pouch of extraction powder into the grounded sample.
4. Add 50ml of distilled or deionized water into the sample. **The ratio of sample to water is 1:5 (w/v)**. Mix using a mechanical roller or vortex for 2min.
5. Transfer 1ml of the extract to a clean tube and centrifuge for 30sec using a mini centrifuge (spin).

Transfer the extract (supernatant) to a clean tube. The extract is ready to use and is good for 1hour at RT. Vortex the extract prior to use.

b. Preparation of samples exceeded the 400ppb limit.

Note: For all samples that tested above 400ppb, the extract should be diluted **21** folds with High Range Solution for re-analysis.

1. Add **2ml** of High Range Solution into a clear plastic tube.
2. Add **100µl** from the extract to the plastic tube containing the HRS. This diluted extract will be used for re-analysis.

Type III (Quantify from 300 up to 3000ppb)
100µl of the extract + 2ml of High Range Solution

9. Method Procedure

1. Before opening the reagents, take the kit out of the fridge and wait until the temperature of the reagents reaches the ambient temperature.
2. Download and/or set the kit's **lot number**, as provided in the Quality Assurance Certificate and Choose the suitable **Type (I or II)**
3. Place the cassette inside the plastic holder. The cassette must be facing up.
4. Dispense slowly **100µl of the extract** into the circular window of the cassette.
5. Insert the plastic holder into the scanner and press SCAN using S-flow software **immediately**. The 4 minute scan count down starts immediately.

NOTE: For all the samples that tested above 400ppb, follow the same procedure using the diluted extract as a sample. Choose **Type III** before scanning.

10. Interpretation of results

The Quantum T2-HT2 Green lateral flow test is manufactured to work along with a scanner device S-FLOW or 3PR.

1st Quantum read: 2 minutes after the start of the analysis the device scans the cassette automatically,

⇒ If the sample is free of T2-HT2, the analysis stops and the result is below LOQ

⇒ If the sample is suspected positive for T2-HT2 (above LOQ), the analysis continues until it completes 4 minutes.

Final Quantum read: After the end of analysis the S-Flow software will use a Lot specific curve to calculate the results.

NOTE: A simple visual interpretation of the stick is NOT possible.

11. Performance Evaluation

11.1 Reference Materials

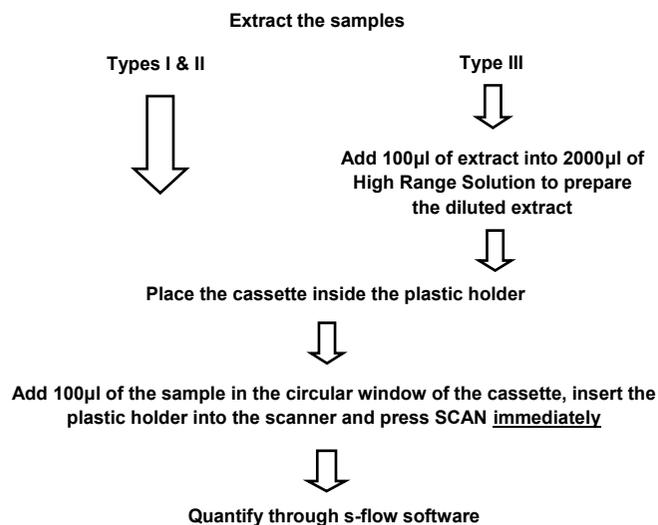
Several reference materials are being used for the evaluation of each product of ProGnosis Biotech S.A. in the context of Quality Control performed by Quality Control Department. Please request a validation report, including the results, at exports@prognosis-biotech.com.

11.2 Proficiency Tests

All products participate frequently in Proficiency Tests. For more information, visit the individual product page in our website: www.prognosis-biotech.com

12. Method Summary

Total method time: 4 minutes



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All immune assays supplied by ProGnosis Biotech S.A., are warranted to meet or exceed our published specification when used under normal conditions in your laboratory. If the product fails during the stated period, a replacement product will be issued.

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G8018-G8040 Manual_Quantum_T2HT2 Green_v3_en



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