



QUANTUM OCHRATOXIN GREEN

LATERAL FLOW TEST KIT

for the quantitative detection of Ochratoxin in grains, cereals and nuts.

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 Ochratoxin Green, G6018/G6040, is a Lateral Flow Test kit for the quantitative determination of Ochratoxin in grains, cereals and nuts.

This kit contains all reagents required for 18 or 40 reactions

Matrices:

Type I: Corn, Corn Flour, Hazelnut, Millet, Peanut, Sunflower Seeds, Spelt, Wheat Bran

Type II: Wheat, Barley, Cashews, Malt

Type III: Quantify samples that exceed 30ppb of Ochratoxin

- **Results in 2 minutes**
- Total test time: 4 minutes
- Range: 0 - 30ppb Type I & Type II, **0 - 300ppb** Type III
- Shelf life: 12 months
- Storage: 2-8°C
- Testing temperature: 18-30°C



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

Specifications

- The LOD of the method is: 1ppb (Type I & Type II), 14ppb (Type III)
- The LOQ of the method is: 1.5ppb (Type I & Type II), 20ppb (Type III)
- Cross-reactivity: The cross-reaction of the anti-Ochratoxin antibody with Ochratoxin A and B is 100 and <0.1% respectively.

1. Description

Quantum Ochratoxin Green is an innovative Lateral Flow device, utilizing state-of-the-art features for the quantitative detection of Ochratoxin A 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

Ochratoxins are a group of mycotoxins produced by some Aspergillus species (mainly *A. ochraceus*, but also by 33% of *A. niger* industrial strains) and some Penicillium species, especially *P. verrucosum* and *P. carbonarius*. Ochratoxin A (OTA) is the most prevalent and relevant fungal toxin of this group, while ochratoxins B and C are of lesser importance. OTA is a potent nephrotoxin and causes both acute and chronic effects in the kidneys of all mammalian species tested. It is also genotoxic (damages DNA) and teratogenic (damages the fetus) and is considered a probable carcinogen, causing renal carcinoma and other cancers in a number of animal species. Most controlling government agencies worldwide have regulations regarding the amount of ochratoxin allowable in human and animal foodstuffs. Accurate and rapid determination of the presence of OTA in commodities is of paramount importance.

3. Principle of the Method

The Quantum Ochratoxin Green lateral flow test is based on the competitive format immunoassay principle. A capture line for Ochratoxin is placed below the control line. The detection system consists of specific antibodies against Ochratoxin 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 Ochratoxin, a color development occurs at the test line, indicating the absence of Ochratoxin in the sample. On the contrary, the presence of Ochratoxin 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 Ochratoxin present in the samples. A valid test should always have the upper control line red.

4. Reagents Provided

Quantum Ochratoxin 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 30ppb.

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 30ppb limit.

Note: For all samples that tested above 30ppb, 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 20 up to 300ppb)
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 30ppb, follow the same procedure using the diluted extract as a sample. Choose Type III before scanning.

10. Interpretation of results

The Quantum Ochratoxin 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 Ochratoxin, the analysis stops and the result is below LOQ
- ⇒ If the sample is suspected positive for Ochratoxin (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

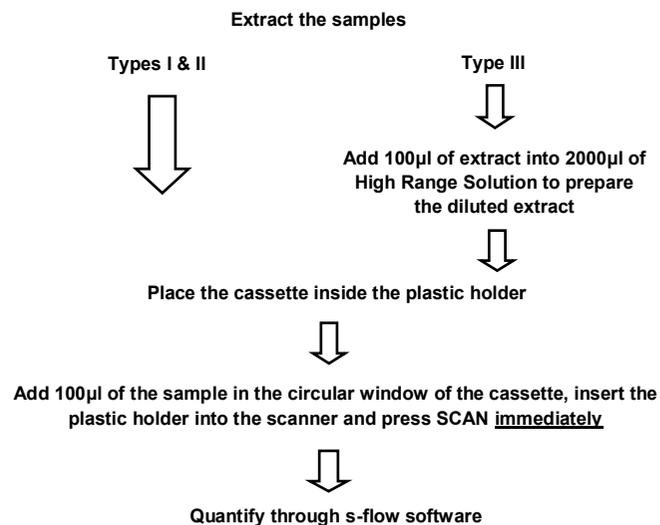
Several reference materials are being used for the evaluation of each product of ProGnosis Biotech S.A. in the context of Quality Control performed by Quality Control Department. Please request a validation report, including the results, at exports@prognosis-biotech.com.

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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0 - 300ppb Type III
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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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G6018-G6040 Manual_Quantum_Ochratoxin Green_v4_en



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