RIDA®QUICK DON

Immunchromatographischer Test
zum Nachweis von DON

Immunochromatographic test
for the detection of DON

Art. No.: R5904

In vitro Test
Lagerung bei 2 - 8 °C
Storage at 2 - 8 °C / 36 - 47 °F

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RIDA®QUICK DON

Brief information

RIDA®QUICK DON (Art. No.: R5904) is an immunochromatographic test for the detection of DON in grain (wheat, triticale and corn).
All reagents required for the assay are contained in the test kit.
The test kit contains 20 test strips for one determination each.
Results are read visually or with RIDA®QUICK SCAN.

Sample preparation:	homogenization and extraction
Time requirement:	sample preparation (for 10 samples).....approx. 10 min test implementation (incubation time).....5 min
Detection limit:	approx. 1.25 mg/kg (ppm) - see 8.1. approx. 0.5 mg/kg (ppm) - see 8.2. A positive result indicates that the sample has a DON content of ≥ 1.25 mg/kg (ppm) or ≥ 0.5 mg/kg (ppm) (see 8. Sample preparation and 10. Results).
Specificity	The RIDA®QUICK DON test reacts with DON in wheat, triticale and corn samples. The test has been validated for these matrices.

1. Intended use

RIDA®QUICK DON is a semi-quantitative (visual evaluation) or quantitative (evaluation with RIDA®QUICK SCAN) immunochromatographic test in strip format for the detection of DON in grain (wheat, triticale and corn).

2. General

Deoxynivalenol belongs to the trichothecene group of mycotoxins and is formed by fungi of the genus *Fusarium*. Deoxynivalenol often occurs in plant products particularly in cereals. Of more than 100 known trichothecenes the mycotoxin deoxynivalenol is the most frequently occurring in Europe and Northern America.

3. Test principle

The basis of the immunochromatographic assay in test strip formate is an antigen-antibody reaction. A specific antibody against DON recognizes the DON molecules in the samples. The results are read visually by observing the development of colored bands or with RIDA®QUICK SCAN. The control band (control line) must be present in all reactions to prove the test strip is valid. The control band intensity decreases with increasing DON concentration in the sample.
The test band (test line) is not visible in the absence of DON in the sample.
If DON is present in concentrations of approx. 0.5 ppm or approx. 1.25 ppm and more the band is visible.

4. Reagents provided

Each kit contains sufficient materials for 20 determinations.
Each test kit contains:

20 x test strips (one for each determination, separately packed)
2 x extraction buffer (450 ml)
ready to use
1 x stop solution (4 ml)
1 x evaluation card

5. Materials required but not provided

5.1. Equipment:

- laboratory mincer / grinder
- balance
- optional: shaker
- optional: filter paper, Whatman No. 1 (equivalent or centrifuge)
- graduated cylinder
- disposable pipettes, e.g. PE-pipettes (Art. No.: Z0005), 5 drops are approx. 100 µl or 100 µl pipette (R-Biopharm FP 100, Art. No.: Z0007)

6. Warnings and precautions for the users

This test should only be carried out by trained employees. The instruction for use must be maintained exactly.

The test strips are sensitive to humidity. Humid test strips may influence the test results negatively, therefore keep the strips away from humidity. This has to be noted especially for already opened reaction strip packing.

7. Storage instructions

Store the kit at 2 - 8 °C / 36 - 47 °F . DO NOT FREEZE the test strips.

No quality guarantee is accepted after the expiration date on the kit label.

Do not interchange individual reagents between kits of different lot numbers.

8. Sample preparation

Bring the reaction strips and the extraction buffer to room temperature (20 - 25 °C / 68 - 77 °F) before use!

The samples should be stored in a cool place, protected from light.
A representative sample (according to accepted sampling techniques) should be ground and thoroughly mixed prior to proceeding with the extraction procedure.

8.1. Detection limit 1.25 mg/kg (ppm)

Do not use this method in combination with RIDA®QUICK SCAN evaluation.

- weigh 1 g of ground sample into a screw cap tube and add 40 ml of extraction buffer
- close the tube and shake the sample vigorously for approx. 3 min (manually or with shaker)
- let the solution come to sedimentation for approx. 3 - 5 min, filtrate or centrifuge
- apply 100 µl of the clear supernatant onto the application area of the test strip

8.2. Detection limit 0.5 mg/kg (ppm), (for visual evaluation or evaluation with RIDA®QUICK SCAN - see 10.2.)

- weigh 1 g of ground sample into a screw cap tube and add 15 ml of extraction buffer
- close the tube and shake the sample vigorously for approx. 3 min (manually or with shaker)
- let the solution come to sedimentation for approx. 3 - 5 min, filtrate or centrifuge
- apply 100 µl of the clear supernatant onto the application area of the test strip

9. Test procedure

- apply 100 µl of the supernatant onto the application area of the test strip
- the result must be read after **5 min**
- **for visual evaluation only:** apply 100 µl (5 drops) of the stop solution onto the membrane of the reaction area to stop the reaction and fix the result

10. Results

10.1. Visual evaluation

The right band in the reaction area is a control band (control line) and must appear in each test procedure. If the band is missing, the test result is not valid because of improper test procedure or deterioration of the reagents. Repeat the test with a new strip. If the right band is missing again, please inform your local distributor.

The test is valid, if the control band (control line) is clearly visible and the result can be evaluated.

If the sample is contaminated very high the control band is visibly very weak and may give an invalid result.

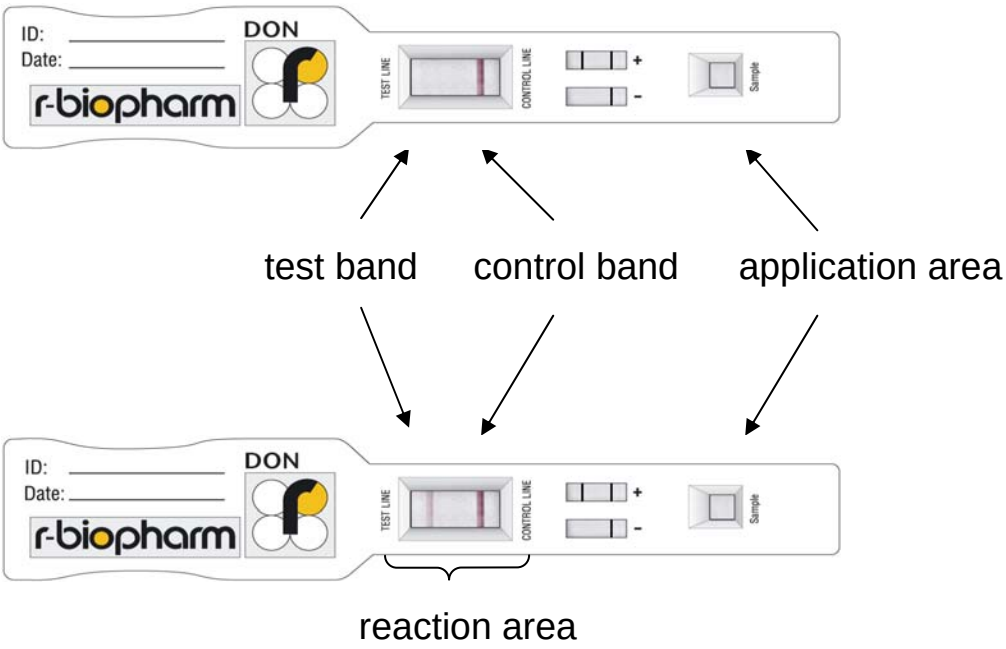
To receive comparable results, the test strips should always be evaluated after 5 min.

The bands darken slightly during the drying process.

The dried test strips can be stored for several weeks protected from light and the bands remain unchanged visible.

negative result: DON level < 1.25 mg/kg (ppm), (1 g sample + 40 ml extraction buffer, see 8.1.)

DON level < 0.5 mg/kg (ppm), (1 g sample + 15 ml extraction buffer, see 8.2.)



positive result: DON level ≥ 1.25 mg/kg (ppm), (1 g sample + 40 ml extraction buffer, see 8.1.)

DON level ≥ 0.5 mg/kg (ppm), (1 g sample + 15 ml extraction buffer, see 8.2.)

control band

The test is valid, if **the control band (control line) is visible in the reaction area** (see evaluation card Fig. 1 to 12).

negative sample

The sample is free of DON (or less than the respective detection limit), if only **the control band (control line) is visible** (see evaluation card Fig. 1, 2, 7 and 8).

positive sample

The sample is contaminated with DON, if the **control band (control line) is visible and the test band (test line) is also visible** (see evaluation card Fig. 3 to 6 and 9 to 12).

Please note:

Also a faint band has to be interpreted as a positive result !

10.2. Evaluation with RIDA®QUICK SCAN (Art. Nr. ZG5005)

First please read the user guide for the RIDA®QUICK SCAN attentively.
The evaluation of the test strip is described under point 3.

Please order the special application notes for RIDA®QUICK DON in combination with RIDA®QUICK SCAN.

Please note:

Using the RIDA®QUICK SCAN for evaluation only the sample preparation as described under point 8.2. Detection limit 0.5 mg/kg (ppm) is suitable (1 g + 15 ml extraction buffer).

Measuring range: 0.5 – 5.5 ppm (1 g + 15 ml) or
0.3 – 0.9 ppm (2 g + 15 ml)

If the sample is contaminated very high the control band is visibly very weak and may give an invalid result.