

STORAGE REQUIREMENTS

Store kit components at room temperature (18-30°C, 64-86°F) to assure full shelf life.

MATERIALS PROVIDED

1. 25 test strips
2. 25 transfer pipettes
3. 25 sample tubes
4. 1 foil pouch of powder extraction solvent (each pouch is enough to prepare 1 gallon (3.8 L) of extraction solution in distilled or deionized water)
5. Paper funnel for adding extraction solvent powder to water
6. Peel-off label for labeling container of extraction solution
7. 1 pouch of extraction additive and measuring scoop

MATERIALS REQUIRED BUT NOT PROVIDED

1. 12-ounce (~350 mL) Mason-type jars (1 per sample)
2. Heat source to boil water
3. 1 gallon (3.8 L) of distilled or deionized water
4. Scale capable of weighing 10 ± 0.1 grams (Neogen item #9427)
5. Sample tube rack (Neogen item #9466)
6. 100 mL graduated cylinder
7. Timer (Neogen item #9426)
8. Waterproof marker

PRECAUTIONS

1. Store test kit at room temperature (18-30°C, 64-86°F) when not in use.
2. Do not use kit components beyond expiration date.
3. Do not freeze test kits.
4. Treat all used liquids, including sample extract, and labware as if containing ruminant by-products to avoid contamination of test samples and the laboratory environment.
5. To avoid cross-contamination, use clean labware for each sample, and thoroughly wash all labware between samples.

FEED SAMPLE PREPARATION AND EXTRACTION

The sample to be tested should be collected according to accepted sampling techniques. Extracted samples should be tested immediately.

1. Discard approximately 7 ounces (220 mL) from a 1 gallon (3.8 L) container of distilled or deionized water. Using the paper funnel supplied, pour the foil pouch of powdered extraction solvent into the container. To completely dissolve the solution, shake the container vigorously for 2-3 minutes. The solution may appear cloudy when completely dissolved.
2. Using the peel-off label supplied, label the extraction solution container indicating the solution's expiry date (6 months from date of preparation). Store any unused extraction solution at room temperature (18-30°C, 64-86°F). **Do not refrigerate.**
3. Weigh 10 ± 0.1 grams of whole feed to be tested (do not grind samples) and place in a Mason-type jar.
4. With the measuring scoop provided, add one level scoop of extraction additive to the jar.
5. Add 100 mL of the prepared extraction solution to the jar. Swirl to mix.

6. Heat in boiling water for 10 minutes.
7. Remove the jar from the heat source. Swirl to mix. Do not allow the sample to cool prior to testing.
8. Allow sample to settle for 1-2 minutes to allow for clear layer to form.

TEST PROCEDURE

1. Remove the appropriate number of sample tubes, label and place in tube rack.
2. Using a new transfer pipette for each sample, transfer approximately 0.5 mL of extract to a sample tube.
3. Place a new test strip with the sample end down into a sample tube.
4. Keeping it in a vertical position, allow the strip to develop for 15 minutes and read results.

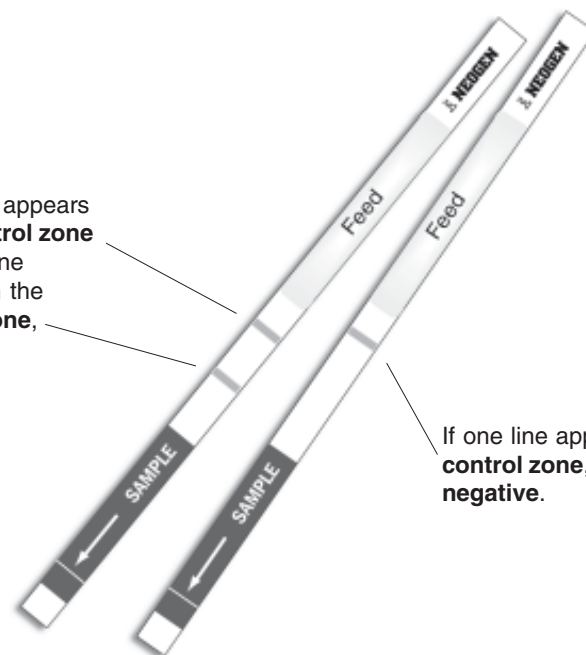
INTERPRETATION OF RESULTS

Examine the strip. If a line of any intensity forms in the test zone, and another line forms in the control zone (2 lines total), the sample is positive. It is not necessary to wait a full 15 minutes if 2 lines develop.

If there is no visible line in the sample zone, but a visible line in the control zone, the sample is negative. If two lines do not develop, wait a full 15 minutes to ensure the sample is negative. If there is no line in the control zone, the test strip is invalid and the sample should be retested with another test strip.

If one line appears in the **control zone** and one line appears in the **sample zone**, the test is **positive**.

If one line appears in the **control zone**, the test is **negative**.



CUSTOMER SERVICE

Neogen Customer Assistance and Technical Service can be reached between 8 a.m. and 6 p.m. Eastern time Monday through Friday by calling 800/234-5333 or 517/372-9200 and asking for a Neogen sales representative or Technical Services. Assistance is available on a 24-hour basis by calling 517/334-0460. Training on this product, and all Neogen test kits, is available free of charge.

MSDS INFORMATION AVAILABLE

Material safety data sheets (MSDS) are available for this test kit, and all of Neogen's Food Safety test kits, on Neogen's Web site at www.neogen.com/msds.html, or by calling Neogen at 800/234-5333 or 517/372-9200.

WARRANTY

Neogen Corporation makes no warranty of any kind, either expressed or implied, except that the materials from which its products are made are of standard quality. If any materials are defective, Neogen will provide a replacement product. Buyer assumes all risk and liability resulting from the use of this product. There is no warranty of merchantability of this product, or of the fitness of the product for any purpose. Neogen shall not be liable for any damages, including special or consequential damage, or expense arising directly or indirectly from the use of this product.

TESTING KITS AVAILABLE FROM NEOGEN**Natural Toxins**

- Aflatoxin, DON, Ochratoxin, Zearalenone, T-2 Toxin, Fumonisin, Histamine

Foodborne Bacteria

- *E. coli* O157:H7, *Salmonella*, *Listeria*, *Listeria monocytogenes*, *Campylobacter*, *Staphylococcus aureus*, *Vibrio parahaemolyticus*

Sanitation

- ATP, Yeast and Mold, Total Plate Count, Generic *E. coli* and Total Coliforms, Protein Residues

Food Allergens

- Peanuts, Milk, Eggs, Almonds

Genetic Modification

- Cry9C (StarLink®), CP4 (Roundup Ready®)

Ruminant By-products

- Meat and Bone Meal, Feed



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Read instructions carefully before starting test

Reveal[®]

for Ruminant in Feed

**RUMINANT BY-PRODUCTS IN FEED**

Prior to 1997, the use of rendered animal products in animal feed was a common practice to supplement its protein content. Concern about the consumption of ruminants (cattle, sheep) infected with bovine spongiform encephalopathy (BSE, a.k.a. "mad cow" disease) led the U.S. Food and Drug Administration to ban the feeding of rendered ruminant by-products to other ruminants.

INTENDED USE

Reveal for Ruminant in Feed is an immunochromatographic lateral flow assay used for the qualitative analysis of ruminant skeletal muscle protein in animal complete feeds and supplements (including powdered, granular and pelleted products) and feed ingredients. The test can detect as little as 1% ruminant materials in feed and feed supplements.

The test is not intended for use with meat and bone meal, or pet foods. For these sample types, use Reveal for Ruminant in MBM (product #8105).

INTENDED USER

The test kit is designed for laboratory or field use by quality control personnel and others familiar with the possibility that feed could be contaminated with ruminant materials. Since technique is very important, operators should be trained by a Neogen representative or someone who has successfully completed Neogen training.

ASSAY PRINCIPLES

Reveal for Ruminant in Feed is a single-step lateral flow immunochromatographic assay. The extract is wicked through a reagent zone, which contains antibodies specific for ruminant skeletal muscle protein conjugated to colored particles. If ruminant skeletal muscle protein is present, it will be captured by the conjugated antibodies. The ruminant-antibody-particle complex is then wicked onto a membrane which contains a zone of antibody specific for ruminant skeletal muscle protein. This zone captures the complex allowing the particles to concentrate and form a visible line. If no ruminant skeletal muscle protein is present, no line will form. The membrane also contains a control zone where an immune complex present in the reagent zone is captured by an antibody, forming a visible line. The control line will always form regardless of the presence of ruminant skeletal muscle protein, ensuring the strip is working properly.