Lateral flow tests

- Feed
- Urine

Microwell ELISAs

- Tissue
- Urine

A global leader in food and animal safety solutions
Ractopamine is a beta-agonist added to feed for promoting the rapid growth of lean muscle in animals raised for meat. While many countries allow the use of ractopamine within specified limits, regulatory agencies in many other countries have banned use of the drug, including those in the European Union, Russia, and mainland China. The drug has no approved use in humans.

To ensure compliance with regulations, animal urine and tissue samples can be easily screened for the presence of ractopamine. In addition, feed manufacturers can use simple screening tests to verify the effectiveness of their cleanup procedures when switching production from ractopamine-medicated feed to feed intended to be ractopamine-free.

Ractopamine, developed by Elanco Animal Health, is commonly marketed under the trade names Paylean for swine, Optaflexx for cattle, and Topmax for turkeys.

countries have banned the use of ractopamine, including those in the European Union, Russia, and mainland China.
**Ractopamine Lateral Flow Device (LFD) for Feed and Urine Screening**

**Intended use**
Ractopamine Lateral Flow Device (LFD) tests are intended for field applications to screen cattle and swine urine samples, and swine and turkey feed samples for the presence of ractopamine.

**Test principle**
The tests are qualitative one-step competitive inhibition immunoassays, which easily detect the presence of ractopamine at set concentrations by utilizing highly specific reactions between antibodies and ractopamine.

**LFD assay procedure**
1. Prepare sample following appropriate extraction procedure (varies by matrix).
2. Remove a test device from the sealed foil pouch. Using the blue MiniPet (available in Starter Kit), apply 100 μL (50 μL for feed) of sample to the test device sample port. Use a new pipette tip for each sample to avoid cross-contamination.
3. Allow the test to develop for 10 minutes and read the result.

---

**Ractopamine Microwell ELISA for Tissue and Urine Testing**

**Intended use**
For the qualitative determination of trace quantities of ractopamine in swine tissue and urine in laboratory setting.

**Test principle**
Ractopamine ELISA is a solid phase immunoassay, which is performed in microwells coated with a specific antibody to ractopamine.

**ELISA assay procedure**
1. Prepare sample following appropriate extraction procedure (varies by matrix)
2. Pipette 50 μL of control and sample(s) into their respective wells
3. Pipette 100 μL of reconstituted ractopamine enzyme into each well and incubate for 10 minutes
4. Wash wells, minimum 3 times, and tap dry
5. Pipette 100 μL of substrate into each well and incubate for 10 minutes
6. Add 100 μL of stop solution and read result with microplate reader at 450 nm
About Neogen

Neogen Corporation develops and markets products dedicated to food and animal safety. The company’s Food Safety Division markets dehydrated culture media, and diagnostic test kits to detect foodborne bacteria, natural toxins, food allergens, drug residues, plant diseases and sanitation concerns. Neogen’s Animal Safety Division is a leader in the development of animal genomics along with the manufacturing and distribution of a variety of animal healthcare products, including diagnostics, pharmaceuticals, veterinary instruments, wound care and disinfectants.

Available LFD screening tests

- **Ractopamine LFD Screening Test for Swine Urine**
  Cat. No.: RT-LFD-25-SU-IDS – Screens at 2.5 ppb
  Kit includes: 25 lateral flow devices and 25 pipette tips

- **Ractopamine LFD Screening Test for Cattle Urine**
  Cat. No.: RT-LFD-25-CU-IDS – Screens at 1 ppb
  Kit includes: 25 lateral flow devices and 25 pipette tips

- **Ractopamine LFD Screening Test for Swine and Turkey Feed**
  Cat. No.: RT-LFD-25-F-IDS – Screens at 0.5 or 4 ppm
  1. 25 LFD devices
  2. 26-50 mL conical tubes
  3. 25 16 x 79 polypropylene tubes and caps
  4. 50 pipette tips
  5. 25-2 mL capped microtubes
  6. 25 medium pour boats
  7. A 1 mL transfer pipette.

Starter kits available (elements can be purchased separately)

- **For Urine LFD tests**
  Cat. No.: RT-STK-LFD-U-IDS
  1. 100 μL MiniPet pipettor
  2. Timer single channel

- **For Feed LFD test**
  Cat. No.: RT-STK-LFD-F-IDS
  1. 50 μL MiniPet pipettor
  2. Timer single channel
  3. Foam rack for 50 mL centrifuge tubes
  4. Foam rack for 2 mL microtubes
  5. Plastic spatula with handle
  6. Red scoop – use large (tablespoon) end only
  7. Squirt bottle (for diluting sample to 4 ppm cutoff)

ELISA Kit Materials provided

All reagents and antibody-coated microwells necessary to run a maximum of 44 samples, if all controls and samples are run in duplicate as recommended.

ELISA Kit and Controls provided

Cat. No. RT-96-TU-IDS

- **Swine Urine**
  Negative control: 0 ppb
  Control: 0.4 ppb
  Cutoff control: 1 ppb
  Positive control: 5 ppb

- **Swine Liver**
  Negative control: 0 ppb
  Cutoff control: 0.3 ppb
  Positive control: 0.5 ppb
  High positive control: 1.0 ppb

Additional Kits and controls available

- **Swine Tissue**
  Cat. No.: RT-MC-4-IDS
  Negative control: 0 ppb
  Cutoff control: 0.25 ppb
  Positive control: 0.5 ppb
  High positive control: 1.0 ppb

- **Cattle Muscle Tissue**
  0.3 ppb
  Cat. No.: RT-CMC-4-I

- **Turkey Muscle Tissue***
  0.2 ppb
  Cat. No.: RT-96-TT-AMS

*USDA AMS Approved Method