Elanco’s Feed Assay Service
Through our Full Value Beef™ relationship, Elanco can help you get the most out of your feed assays by:

- Identifying sampling procedures that match the purpose of the feed assay
- Providing containers, collecting samples and incurring assay costs
- Translating results into improved feeding management practices

Understanding the Elanco Feed Assay Service

Animal feed additives and medications are thoroughly tested to determine the most effective dosage or dosage range. Dosage amounts and ranges also must adhere to regulations established by the U.S. Food and Drug Administration (FDA). The testing and regulations are designed to ensure human health, animal health and optimal results for beef producers.

To ensure optimal animal health, feeds must be correctly delivered to facilities and consistently contain the available nutrients required by animals for body maintenance, growth or reproduction. Several factors in the formulation and manufacturing processes can affect the quality and consistency of feed — factors including bin and equipment cleaning, storage conditions, mixing and pelleting.

To help ensure optimal animal health results through consistent feed, Elanco provides feed assay services for beef producers and feed mill operators. For more information about the feed assay service, contact your Elanco sales representative.

FEED TYPES

**Type A:** Medicated articles intended solely for use in the manufacture of another Type A medicated article or in the manufacture of a Type B or Type C medicated feed.

**Type B:** A medicated feed that contains a Type A medicated article or another Type B medicated feed plus a substantial quantity of nutrients (not less than 25% of the total weight) and is intended solely for use in the manufacturing of another Type B medicated feed or a Type C medicated feed. Before being fed to animals, it has to be substantially diluted with one or more nutrients to produce a Type C medicated feed.

**Type C:** A medicated feed intended as the complete feed for the animal. Also may be fed top dressed (added on top of a usual ration) or offered free choice in conjunction with other animal feed. It is manufactured by diluting a Type A medicated article, a Type B medicated feed or another Type C medicated feed.

FEED CATEGORIES

- **Category I:** No withdrawal phase
- **Category II:** Product has a withdrawal phase

ASSAY VARIANCE & ASSAY LIMITS

Acceptable assay limits for each product are set by the FDA. The permissible assay variance (also known as the PAV) refers to the limit at which an assay passes or fails. It is based upon the “expected result” of each assay and the “actual result” of each assay.

ABOUT FEED ASSAYS

- Feed assays are laboratory tests that quantify the amount of a specified material contained within a sample of feed
- The feed assay service is a value-added service provided by Elanco to support the proper and optimal use of our products
Understanding Assay Requirements

WHEN TO SEEK A FEED ASSAY

Elanco provides feed assays:

• To assess compliance of a Type B or Type C medicated feed from a Category II, Type A medicated article
• As part of a product demonstration evaluation (the Elanco representative will either collect samples or send a representative who is properly trained for sample collection and submission)
• To ensure correct concentration of products due to ration changes or product clearances
• To address product complaints or adverse drug events (ADEs)

WHEN ASSAYS ARE REQUIRED

• The FDA requires three assays annually for those feed mills holding a medicated feed mill license (any Category II medicated feed)
• When using Elanco products with a zero-day withdrawal in combination with another Category II medicated article, the FDA requires three assays total, to be run annually (rotate assays between each product being used within the combination)

REQUIREMENTS FOR SUBMITTING A SAMPLE

1. Proper container and label: Samples must be in an original Elanco assay bag or bottle with an original customer ID label attached. Assay supplies may be obtained from Elanco sales representatives.
2. Appropriate product box checked: Check the appropriate product box for the sample that you are submitting. Check only one box. If more than one box is checked, the sample will not be assayed.
3. Expected level: Samples without the expected level — expressed in g/ton on an as-is basis — will not be assayed unless prior arrangements have been made. If the expected level is unknown, please contact an Elanco sales representative so appropriate measures can be taken.
4. Retesting: There will be no retesting of samples.
5. Shipping: Elanco provides pre-paid UPS shipping labels and cardboard boxes for shipping assay samples. Place the sample in the appropriate shipping container with the proper pre-paid UPS label attached.

Various labels are provided according to the product being shipped:

a. Dry supplement samples (HeifermaX®, Rumensin®, Tylan®, Pulmotil® or Optaflexx®) — use UPS 2nd-day air labels
b. Liquid feed supplement samples (HeifermaX, Rumensin, Tylan or Optaflexx) — use UPS 2nd-day air labels
c. Rumensin or Pulmotil bunk samples — use UPS 2nd-day air labels
d. Optaflexx bunk samples — use UPS next-day air labels (Optaflexx bunk samples must be shipped UPS next-day air early in the week)

Ship to: Covance Labs • Elanco Assays — Bldg. 220 • 671 S. Meridian Rd. • Greenfield, IN 46140-8501

PROPER SAMPLING TECHNIQUES

1. Obtain samples immediately after feed delivery and prior to cattle having access to the bunk.
2. Use a standardized measuring device or scoop to help ensure consistency of the sample.
3. For routine assays from bunk or supplement samples, obtain a single composite sample from several locations in the bunk or bin.
4. For mixer studies, take three to five uniformly spaced samples from each load of feed.

WHAT IS AN ADVERSE DRUG EVENT?

Any observation in animals, whether or not considered product-related, that is unfavorable and unintended, and that occurs after any use of a Veterinary Medicinal Product (VMP) (off-label and on-label uses) is considered to be an ADE. Included are events related to a suspected lack of expected efficacy or noxious reaction in humans after exposure to VMPs. This term may also apply to violations of approved residue limits of an animal drug product in animals or animal products, and/or violations of environmental limits or restrictions associated with exposure to an animal drug product.

For information about Elanco products or to report an adverse event, call 1-800-428-4441.
Interpreting Results

Results will be reported as g/ton on an as-is basis. The “Acceptable Limits” refer to the “Assay Limits” for the product being assayed and are set by the FDA. Anything within these limits is statistically considered to be 100 percent and, therefore, passes the FDA specifications. The “Percent of Claim” refers to the ratio of the “Actual Result” to the “Expected Level” expressed on a percent basis. An example of a typical assay result is provided below.

Product: Rumensin for cattle
Expected Level: 452 g/ton
Actual Result: 396.6 g/ton
Acceptable Limits: 85.0 – 115.0 (% of claim)
Percent of Claim: 87.7%
STATUS: PASS

For all products: The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

HeifermaX 500: Heifers fed in confinement for slaughter
For increased rate of weight gain, improved feed efficiency and suppression of estrus (heat): Feed 0.5 to 2.0 lb/hd/d in a Type C medicated feed to provide 0.25 to 0.5 mg/hd/d.

HeifermaX 500: Heifers intended for breeding
For suppression of estrus (heat): Thoroughly mix HeifermaX in the supplement to provide 0.5 mg/hd/d of melengestrol acetate.

Pulmotil: IMPORTANT SAFETY INFORMATION
CAUTION: For Pulmotil: IMPORTANT SAFETY INFORMATION

Contact us
For more information, please contact your Elanco sales representative. Or, in emergency situations, contact Elanco Animal Health at 1-800-428-4441.

For additional assay bags, bottles, labels and UPS shipping materials, contact Elanco at 1-800-428-4441.

For increased rate of weight gain and improved feed efficiency: Feed 5 to 40 g/t of monensin (90% DM basis) continuously in a complete feed to provide 50 to 480 mg/hd/d.

For the prevention and control of coccidiosis due to Eimeria bovis and Eimeria zuernii: Feed 10 to 40 g/t of monensin (90% DM basis) continuously to provide 0.14 to 0.42 mg/lb of body weight/d, depending upon severity of challenge, up to a maximum of 480 mg/hd/d.

Rumensin: Growing cattle on pasture or in drylot
Feed at a rate of 0.14 to 0.42 mg/lb of body weight/d, depending upon severity of challenge, up to a maximum of 480 mg/hd/d. The Type C medicated feed must contain 15 to 400 g/ton of monensin (90% DM basis). Do not self-feed.

For increased rate of weight gain, improved feed efficiency and increased carcass leanness: Feed 9.8 to 24.6 g/ton of ractopamine hydrochloride (90% DM basis) continuously in a complete feed to provide 70 to 430 mg/hd/d for the last 28 to 42 days on feed.

Optaflexx: Complete feed
For increased rate of weight gain and improved feed efficiency: Feed 8.2 to 24.6 g/ton of ractopamine hydrochloride (90% DM basis) continuously in a complete feed to provide 70 to 430 mg/hd/d for the last 28 to 42 days on feed.

For increased rate of weight gain, improved feed efficiency and increased carcass leanness: Feed 9.8 to 24.6 g/ton of ractopamine hydrochloride (90% DM basis) continuously in a complete feed to provide 90 to 430 mg/hd/d for the last 28 to 42 days on feed.

Tylan
For reduction of incidence of liver abscesses associated with Fusobacterium necrophorum and Arcanobacterium pyogenes: Feed continuously at 8 to 10 g/t of tylosin (90% DM basis) to provide 60 to 90 mg/hd/d. Caution: Federal law restricts medicated feed containing this veterinary feed directive (VFD) drug to use by or on the order of a licensed veterinarian.

Elanco supports the use of shared class antibiotics for therapeutic uses while under the oversight of a veterinarian. More details on Elanco’s Antibiotic, Welfare and Sustainability Policies can be found on: www.elanco.com/our-responsibility/responsible-use-of-antibiotics

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Eimeria bovis
Eimeria zuernii
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