

A photograph of a laboratory technician wearing a white lab coat and blue nitrile gloves. The technician is using a pipette to transfer liquid into a multi-well plate. The background shows various laboratory equipment, including a computer monitor displaying data. The image is partially obscured by a white circular graphic at the bottom left.

Kemin Customer Laboratory Services

**Dedicated support to help
you meet performance goals**

Success starts in the lab

Kemin Customer Laboratory Services (CLS) is a team of experienced scientists that provides dedicated laboratory support to ensure Kemin ingredients meet your performance goals. We partner with you, as well as Kemin sales and technical service staff, to deliver chemistry and microbiology testing services.

Why test?

At Kemin Animal Nutrition and Health, we have a passion for helping our customers raise healthy livestock and poultry. When you partner with Kemin, we can help you improve the overall nutrition and health of your livestock and increase the safety of the food chain through Customer Laboratory Services.

Plus, testing your feed, fats, eggs and water enables you to identify potential challenges that hinder performance and profitability. These challenges are often difficult to detect without testing, which can impact your bottom line.

What makes Kemin Customer Laboratory Services different?

Unlike other third-party testing services, Kemin doesn't just send you a report to decipher for yourself. We recommend potential product and management solutions and use our testing protocols to confirm they're the right fit for your operation.

Our process

The Kemin Customer Laboratory Services team partners with you to understand your potential challenges, create solutions through lab-scale efficacy testing procedures and can provide ongoing support to ensure the selected course of action is helping you achieve your goals.

1. UNCOVER POTENTIAL CHALLENGES

Our team works with you to assess the quality of feed ingredients and water that may introduce risk and/or reduce nutritive value.



2. IDENTIFY SOLUTIONS

We utilize lab-scale efficacy testing procedures to select the appropriate product at an effective inclusion rate.



3. DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

After identifying a solution, our team will continue to provide support, as needed. This includes application verification and mixing efficiency studies (where possible), which are especially helpful for ensuring each part of the mixer is receiving the correct level of liquid products. We can also provide spot checks, which will ensure the product is applied at the desired levels.



[SEE OUR SERVICES](#)

Lab services to help your operation

Feed safety

Controlling in-feed pathogens, like *Salmonella*, is the key to on-farm biosecurity. To help keep pathogens at bay, we offer a variety of services to help you test for and address profit-robbing pathogen challenges in feed and feed ingredients.

UNCOVER POTENTIAL CHALLENGES

Our microbiologists can test feed and feed ingredients for *Enterobacteriaceae* or *Salmonella* to determine the prevalence of harmful microorganisms.

IDENTIFY SOLUTIONS

Once a product, such as Sal CURB®, has been identified as a potential solution, our chemists will recover the product from the feed to determine the application level. Our microbiologists will test the same sample for the presence of *Salmonella* or *Enterobacteriaceae* to determine the efficacy of the product on the treated feed.

DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

Our team, including Customer Laboratory Services and Kemin Application Services, will continue to work with your operation to provide spot checks for application verification and efficacy testing.



Feed quality

Effective mold and mycotoxin management starts with knowing what is in your feed. Mold growth in storage can dramatically reduce the quality and nutritional value of grains and finished feed. Mycotoxins are unavoidable and can cause significant production loss, even before you see the effects on your animals. To help manage ingredient quality and reduce negative health impacts, our team can test your grain, forage, feed, etc. for microbial stability, molds, yeast and more.

UNCOVER POTENTIAL CHALLENGES

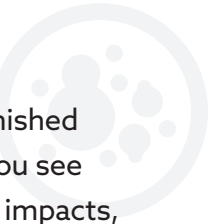
Feed, feed ingredients and forage can be analyzed for microbes and markers of microbial stability to quantify the problem.

IDENTIFY SOLUTIONS

If a mold or yeast issue has been confirmed, the Kemin team can provide guidance on the best mold inhibitor and dial in a dose rate. The efficacy of the mold inhibitor can be shown by performing a days-to-mold study or a CO₂ production study.

DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

Our chemists can analyze feed or feed ingredients to ensure the Kemin mold inhibitors have been applied at the correct rate. It's especially valuable to measure the product level after pelleting to ensure the target level will be delivered.



CLS microbiologists utilize an Enzyme-Linked Immunosorbent Assay (ELISA) kit to analyze feed ingredients for mycotoxins. The table here details the testing range for each of the mycotoxins analyzed by our lab.

| MYCOTOXIN | TESTING RANGE |
|----------------|---------------|
| Aflatoxin | 5 - 50 ppb |
| Deoxynivalenol | 0.5 - 5 ppm |
| Fumonisin | 0.5 - 6 ppm |
| T-2 Toxin | 25 - 250 ppb |
| Zearalenone | 25 - 500 ppb |



Oxidation control

Most fats and oils are purchased without a guaranteed level of nutritional value. They are often actively oxidizing, lowering the nutritional level available to animals. Plus, once they're consumed, they can lower growth and performance of the animal due to the additional oxidative stress.¹ To manage oxidation, it is critical to understand both the current state of and potential for future oxidation in the fats and oils going into the feed.

UNCOVER POTENTIAL CHALLENGES

Our team will test the fat samples collected from the delivery truck and your storage tank for markers of oxidation and provide a summarized report of the results.

IDENTIFY SOLUTIONS

Once we have a better understanding of the fat quality, our team can provide a product recommendation tailored to your needs. Our lab can design an accelerated stability study using a sample of your fat, oil, feed ingredient or feed. This will provide a detailed understanding of how the antioxidant protects the matrix against oxidation.

DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

After an antioxidant is implemented, treated fat or feed will show lower markers of oxidation, including lower peroxide value (PV) and higher oxidative stability index (OSI). Our lab can test for these markers and for residual antioxidants in fat or feed.

| METRIC | ANALYSIS |
|---------------------------------------|---|
| Current State of Oxidation | Peroxide value (PV) Secondary oxidatives (2,4-decadienal, hexanal) |
| Potential for Future Oxidation | Oxidative stability index (OSI)* |
| Residual Antioxidants | BHA, BHT, TBHQ, EQ, and tocopherol levels by gas chromatography (GC) |

*Fat or oil samples only



Pigmentation testing

Consistent rich yolk color is an important advantage of high-quality and safe Kemin carotenoid products, and is key to the marketability of poultry products. Our team has analyzed thousands of egg yolks and feed samples to ensure our customers achieve their yolk color goals. Through a targeted sampling plan, CLS can guide you to your pigmentation goals.

UNCOVER POTENTIAL CHALLENGES

Our team can test the feed or egg yolks for carotenoid levels. This provides insight into the current pigmentation levels and how it aligns with your goals.

IDENTIFY SOLUTIONS

Once the current level of carotenoids in the feed and yolks is understood, the Kemin team can provide a recommendation for a pigmenter product and the levels needed to reach your goals.

DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

It is important to monitor the carotenoid levels in the feed or yolks consistently. Testing after implementing a product or changing its inclusion level will provide insight into how the changes are working.



Water quality

Delivering high-quality water directly to your herd or flock is key to production performance and preserving health. By sampling water and swabbing the water lines, our team can help determine the levels of contamination.

UNCOVER POTENTIAL CHALLENGES

Our lab will test the water samples and swabs from your drinking line for presence of biofilm and other water-quality indicators and provide a summarized report of the results.

IDENTIFY SOLUTIONS

Our team will provide a protocol for implementing a waterline cleaner at your site.

DELIVER PRODUCT SUPPORT AFTER IMPLEMENTATION

Collecting a second set of water and swab samples after implementing a sanitation program will show the difference in pathogen load in the lines.

1. Shurson, J. and B. Kerr. Fat, oxidation and the swine diet. National Hog Farmer, July 19, 2018.

Connect with us

Ready to learn how Kemin Customer Laboratory Services can help you maximize performance? Visit kemin.com/labservices or contact your local Kemin representative.

