



NATURAL PALATABILITY

“Using Kemin’s expertise in natural petfood preservation, PALTEVA™ products are naturally protected from microbial contamination.”

MARKET LONGEVITY OF NATURAL

Natural pet food, considered a niche market as little as a decade ago, has proved that it has staying power, with a Compound Annual Growth Rate (CAGR 2013-2018) of 16% for North American petfood launches containing a natural claim.¹ Pet owners investing in natural products are also interested in other common “clean label” claims, such as no grains, allergens, artificial flavors, colors or preservatives.

INTRODUCING PALTEVA

For over 25 years, Kemin has provided natural protection from oxidative damage in premium quality pet diets. Kemin can now also provide natural flavor addition to pet diets with PALTEVA - a new line of natural palatants.

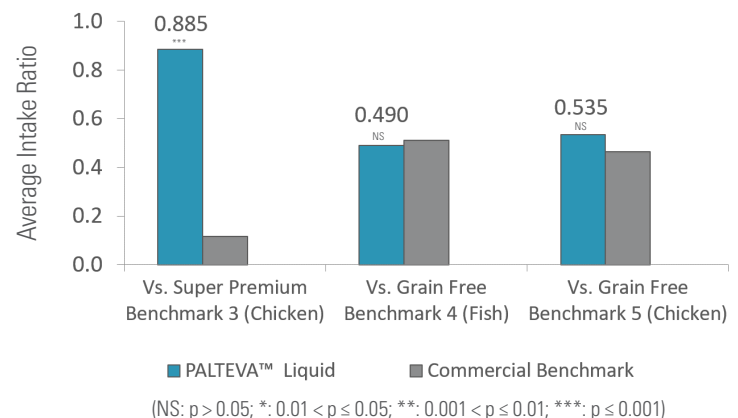
Features and Benefits

- Formulations in a range of palatability performance categories, including super premium
- Naturally-sourced flavor with supporting regulatory documentation
- Naturally stabilized and preserved
- Formulations addressing ingredient and origin restrictions and claims
- Animal-based or plant-based products
- Backed by quality control standards and verification
- Supported by technical laboratory and application services

CHALLENGES IN NATURAL PRESERVATION

Providing super-premium flavor with natural ingredients is not the only challenge when designing a natural palatant. Most liquid palatability enhancers on the market are protected from microbial contamination with synthetic ingredients, such as potassium sorbate. Without natural alternatives to synthetic preservatives, some natural palatant products are not protected at all, resulting in very short shelf life and more demand on the petfood manufacturer to manage inventory. Using Kemin’s expertise in natural petfood preservation, PALTEVA products are naturally protected from microbial contamination and maintain an adequate shelf life.

Figure 1: Palatability Performance in Canines of Liquid PALTEVA Palatant versus a Super Premium Palatant²



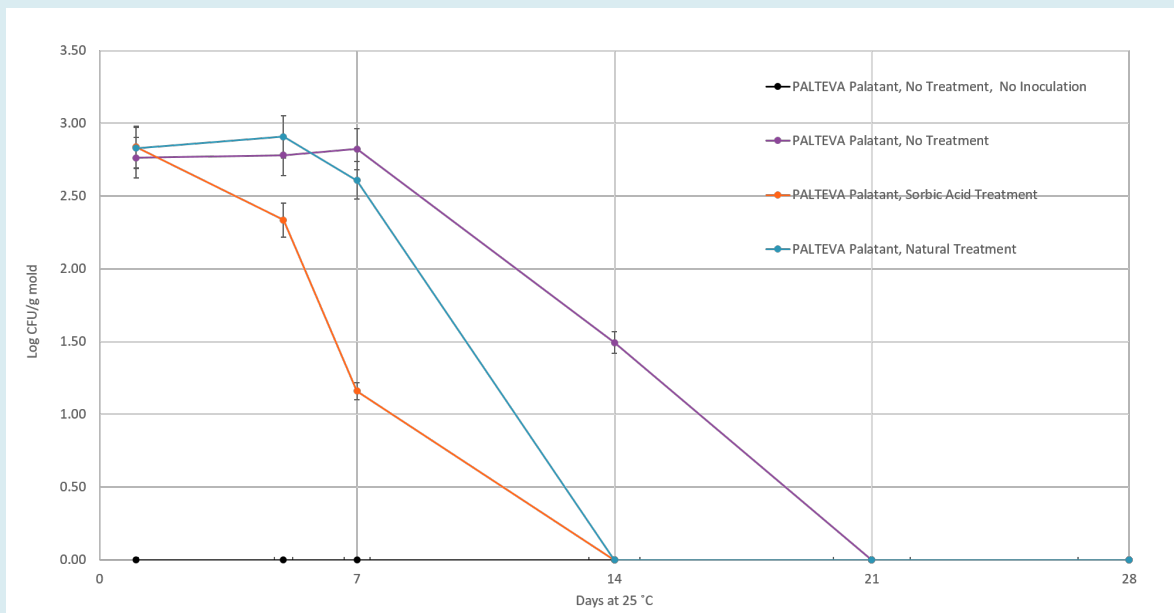
MOLD TESTING TECHNOLOGY

Kemin's natural preservation system was put through a series of days-to-mold and mold-challenge studies.

- In an initial study, a liquid palatant was evaluated with and without potassium sorbate to confirm that mold can indeed grow on a liquid palatant.
- Subsequent days-to-mold challenges were conducted to verify the appropriate treatment level.
- Additional mold challenge studies were conducted to model a potential production contamination and customer mold re-contamination scenario.

Figure 2 shows the results of a mold challenge study. The graph displays log reduction of mold counts over time in a study designed to mimic a production contamination scenario. A PALTEVA-brand palatant was either left untreated for mold prevention (negative control), treated with a synthetic sorbic acid (positive control) or treated with Kemin's natural mold protection technology. The palatants were challenged with a 5×10^5 spores/mL concentration inoculum of two different mold types. Results show samples treated with sorbic acid and natural mold technology showed a decline in mold counts below the limit of detection after 14 days. The untreated, negative control showed a decline in mold counts below the limit of detection after 21 days.

Figure 2: PALTEVA Palatant Mold Challenge Study³



YOUR DEDICATED PARTNER FOR PETFOOD PALATABILITY

The Kemin Technical Service and Customer Laboratory Service (CLS) teams are your palatability partners throughout the pet food manufacturing process. Our experienced team of experts is available to provide technical advice, vendor assurance and laboratory testing to meet your palatability needs.

References:

1. Innova Database, 2019
2. Kemin Internal Document: SD-19-0001
3. Kemin Internal Document: SD-19-0002

