

NUTRISCAN: Salivary Diagnostic Test for Food Intolerance

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Nutriscan is the only clinically predictable diagnostic test for dogs, cats and horses to identify the commonly seen food intolerances and sensitivities in saliva. It is not a test for the rarely seen true allergies to foods. The Nutriscan test is patent protected in the United States and internationally.

This test measures both IgA (secretory immunity) and IgM (primary immune response) antibodies to 24 selected foods in the saliva of dogs and cats, and 22 selected foods in the saliva of horses. High antibody levels indicate that the animal has a food sensitivity and intolerance to that food or foods. It is not a DNA test or a cheek/gum swab test.

By contrast, cheek or gum swabs alone do not generate sufficient biological fluid to quantitatively determine specific food reactivities. Simple positive or negative results, for instance from tissue swabs, do not provide information about the specificity or sensitivity of the assays used. Therefore, selection of foods based upon this type of information is medically and scientifically unreliable.

Food allergy tests measure antibodies to IgG and IgE in serum or feces. These are typically more acute allergic reactions to foods, whereas Nutriscan measures IgA and IgM antibodies on the bowel's mucosal surface, and thus more directly correlates to symptoms of bowel disease.

The Nutriscan test also differs from other food "allergy" skin testing, which used to be considered the "gold standard" of allergy testing. Aside from being unsightly and requiring that a large patch of skin be shaved, these tests are costly and do not always identify the true source of allergic reactions.

Nutriscan testing applies to healthy pets as well as those with known or suspected food reactivity, because saliva testing can reveal the latent or pre-clinical form of food sensitivity, before a clinical or bowel biopsy diagnosis of inflammatory bowel disease or "leaky gut syndrome" is made. Thus, it can be used to predict a developing or latent food reaction, as early as 5-7 months before the appearance of overt clinical signs of itching and scratching and/or gastrointestinal (GI) tract issues (such as excessive gas, bloating, diarrhea, soft stools, and gastric upset).

Food sensitivities are usually seen from as early as 2 hrs and up to 72 hrs after eating an offending food or foods, so it can be difficult to connect symptoms with a food or foods eaten several days

previously. There is a very high correlation between delayed food sensitivity and the amount and frequency of the food consumed.

For accurate testing with Nutriscan, the animal should not have eaten anything overnight before the saliva is collected. About 2 ml of saliva is required, which should wet about half of the dental cotton rope provided with the kit. The kit is sent upon request at no charge to veterinary clinics and clients, worldwide. The saliva sample is stable for up to 30 days at ambient temperature for transport to Hemopet's Laboratory. The sample tube into which the wet rope is placed for shipment should be capped and tightly sealed to minimize dehydration. If necessary, the rope can be re-hydrated with a small measured amount of saline for assay.

Results are quantified in Units per ml of saliva. The antibody levels present in the custom-made immunoassay plates are measured by optical density readings and these are converted to Units per ml of reaction. In dogs and cats, negative reactions measure less than 10 Units per ml of saliva. Those between 10.00-11.49 Units per ml are considered weak reactions; those from 11.50 to 14.99 are medium (moderately high) reactions. Strong reactions are 15.00 Units per ml or higher. [Note that the units of reactivity scale differs for horses.]

The clinical significance of weak reactions is unclear, but in dogs and cats with established clinical signs of food sensitivity, it would be prudent to avoid foods reacting close to the 11.50 Units per ml level. We suggest repeat testing every 12 -18 months in healthy pets, and every 4-6 months in food reactive pets.

For pets reacting to beef on Nutriscan, they may also react to bison and buffalo. Similarly, those reacting to lamb may also react to goat. However, the poultry reactions are genomically distinct, such that reactors to chicken can be tolerant to duck or turkey and *vice versa*. Pets reacting to cow milk may also react to cheese products from cows, although not all cheese is made from the whey fraction of the milk. Hen eggs, however, are a protected source in the body so those reactors may tolerate chicken and *vice versa*.

Also, please note that chicken, venison and mutton (but not lamb) are considered pro-inflammatory "hot" foods in Chinese medicine and are best avoided in pets with food-related itching and leaky gut syndrome, even if they test as "safe" to feed on Nutriscan.

Summary of Results

We have tested more than 17,000 canine samples with Nutriscan by the spring of 2017, and since starting cats at the end of September 2013, we have tested over 750. Two double-blind clinical trials have been conducted in the USA and Europe, and results validated the Nutriscan test and affirmed its clinical utility.

One veterinary dermatologist performed a double-blinded study at no charge, but then revealed afterwards that the samples included human saliva, street water, and vodka along with some healthy and suspected food intolerant dog salivas. These non-saliva samples interfered with the pH of the 47-sample immunoassay plate as well as results for the other clinical client samples on the plate. This colleague, without our knowledge, then stated that Nutriscan testing did not work and apparently also informed the other members of the veterinary dermatology board (ACVD). Once we explained how this trial of “fake” saliva ruined the assay results, this fact was acknowledged but apparently has never been explained to other ACVD members, clinical veterinarians and clients interested in this testing.

Many clients have reported amazing success using Nutriscan to identify food intolerance in their pets; these stories appear on Hemopet’s social media pages. Reference citations below include a published peer-reviewed paper and a chapter in our recent book.

Conclusion

Nutriscan, the novel patented salivary-based food sensitivity and intolerance test offers a reliable and clinically predictive alternative to food elimination trials, serum-based food allergy testing, and skin patch testing. Two completed, double-blinded clinical trial studies validated the test and affirmed its clinical utility.

References

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