

PANDEAN Diet Palatability Review

Introduction

PANDEAN Diet is a new form of feeding companion animals: They are not a brand or a product made by anyone company. Instead PANDEAN Diets are a scientific grouping of diets that are aligned to the following:

- **PA Pasteurized** for bacterial and parasitic safety. Pasteurized refers to a gentle cooking process at low temperatures for a short duration sufficient enough to destroy bacterial and parasitic activity to ensure safety without degrading the nutrient value. Pasteurization enables the nutrients value to remain high and 'locked' in while also ensuring the food is safe for consumption.
- **ND Nutrient Dense** means that the nutrient density per calorie is very high (excluding moisture). Most PANDEAN Diets are made with fresh meat vegetables, grains, essential oils and vitamins to provide the dog with an excellent nutritional balance for a long and healthy life and formulated as a protein-rich, fresh meat based diet most suitable to the dog's natural digestive process - with an extremely high palatability factor.
- **AN All Natural.** A PANDEAN Diet must not contain any preservatives, humectants, sugars or additives other than vitamins and minerals. Only a high content of fresh meat with added vegetable ingredients can be used rather than rendered by- products or high contents of proteins derived from grain based ingredients.

Summary Conclusion

Fresh, meat-based, PANDEAN diets are exceptionally palatable because of the gentle cooking process and the meat ingredients. Meat and organs are what our companion dog's ancestors ate - hunting and consuming various small animals, and during times of scarcity, plant materials. A typical PAN DEAN Diet has similar ingredient content to the food provided by Mother Nature - fresh meat tissue, organ meats (chicken, chicken liver), and fresh vegetables (carrots, peas) along with some nutrient rich grain (brown rice) as a fiber source.

Palatability Sensory Physiology

Dogs have the salivation reaction when fed fresh chilled deli-meat. This is because palatability is driven by the cues of fresh aroma, taste and texture. The dog's nose (of more than 200×10^6 olfactory cells and its vomeronasal organ) takes in thousands of volatile olfactory notes, which are at high levels in nutrient dense meat-based foods i.e. PAN DEAN Diets. The sensory physiology is a bit simpler, the compounds generally non-volatile - a combination of sweet, salt, bitter, sour, or umami (related to the amino acid glutamate found in abundance in liver) sensations. An additional organ, the dog's tongue, has more than 1700 taste buds. Often forgotten in palatability is the importance of tactile sensory stimulation - commonly referred to as 'mouth feel.' As far as texture is concerned, a dog likes to lick, bite and chew into firm meat diets.

Response to Meat-Based Food

The high protein and fat content from real meat and organs of a typical PANDEAN Diet induce exceptional responses in canines. "I have worked with formulas containing as little as 8% and as much as 70% animal products, and with few exceptions; the higher the level, the greater the palatability," states Dr. Herbert Heinicke, Ph.D., experienced pet food industry consultant. Fat is especially attractive to dogs, especially if it naturally occurring in the meat rather than coated on a grain-based kibble. Just like the aroma and taste of fat oozing from a well-cooked steak or a juicy piece of meat, PANDEAN diets have natural palatability built-in. Though dogs like to 'wolf down' their food, many of the smaller breeds are more discerning. As wolves had to compete for sufficient intake with pack mates, eating quickly was a bit of a necessity, but this is lost on many of the smaller breeds that, in a home environment, do not have to compete for limited food.

Palatability Testing

Using a variety of dog breeds, the aroma and taste of each P ANDEAN diet is constantly monitored with regular palatability trials. The testing facility has 96 dogs, of all sizes and ages, including beagles, miniature schnauzers, Dobermans, Labradors, Akitas, terriers, and mixed- breed dogs. Provided plenty of outdoor exercise with their playmates, their health is routinely monitored, and a policy of non-evasive treatments is strictly followed, as is every aspect of their eating behavior. In palatability tests featuring comparison between different company's products, groups of dogs are fed various recipes of dry, canned, moist-preserved, raw or BARF, and PAN DEAN diets, in two-bowl and one-bowl (monadic) feeding trials, evaluated by careful statistical analysis. Fresh chilled P ANDEAN pet foods have out-scored other forms of food by significant margins, having a particularly significant preference when compared to traditional dry grain-based kibble pet foods.

Feeding Suggestions for PANDEAN Diets

At first feeding, a dog will probably react very positively to a PANDEAN Diet. Dogs are more neophilic than neophobic. They prefer something new and the so-called novelty factor for a new product form will often be high. In addition, dramatic changes in meal type can result in intestinal upset as the dog's system adjusts to the new food source. This is particularly true even when the quality of the food is improved. For instance, if a canine is used to grain-based kibble diet which includes very little meat by-products (« 20%) and is introduced to a PANDEAN Diet that has as much as 70% real meat tissue and organ meat, stomach and intestinal upset can occur for the first few days. This is especially true when the dogs eat too aggressively - which is often the case when trying a meat base diet for the first time in their lives. Therefore, to prevent over-eating and to smooth any transition issues, it is suggested that small amounts of the PANDEAN Diet be mixed into the Dog's traditional kibble or other diet gradually over 5 - 7 days until all the food in the bowl is the new diet. PANDEAN's novelty and meat-base causes excitement versus dry or canned diets and therefore the need for a graduated transition.

Also, as with any highly palatable food, the pet owner needs to be cautious of overeating to prevent obesity. Like any good food, proper quantity intake is important. The veterinarian should advise the client to adhere to the feeding recommendations on the package. Remember, PAN DEAN Diet's are nutrient dense, 4600 kcal ME/kg, so the average 40-pound dog only needs about 400 - 600 g (1 -1 1/3lbs) per day depending on the dog's activity level.

When feeding a dog a PANDEAN food, consider removing it from the fridge and letting it sit at room temperature for a few minutes before feeding. At closer to 'room temperature,' its aroma and taste will be even more enhanced. Chilled food stays fresh, a bit of warmth enhances the flavors and aroma.

**Test data from panels to be included in July, including chart showing representative palatability test response.*

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Dr E. Geaga has 20 years experience in Pet Food Research & Development; he also has 12 years experience in Pet Food Technical Application. He was a member, of the International Food Technologists for 6 Years and has worked and consulted with major Pet Food companies providing technical expertise and support in any product improvements requested by the customers. He has also assisted in the interpretation and implementation of pet food rules and regulations before a specific product, can, dry or treats, is scheduled for production. He is currently consulting for a large Pet Food company in the coordination and development of a new product in the pet food category.