

# USE OF FRESH MEATS IN PET FOOD: DIGESTIBILITY OF FINAL PRODUCT

A recent blog post from Norway discussed the digestibility of kibble and stated that fresh meats do not impact final digestibility of the product. This article incorrectly assumes that higher digestibility equals a higher-quality product. The authors do not take into account the ingredients that go into making kibble, the cooking process, and/or the processing method before the ingredients are incorporated into the food. The source and quality of the ingredients, along with the cooking temperature of the meat products, are also important factors contributing to its final digestibility.

## PROCESS

It is widely understood that the cooking method has a significant impact on the digestibility of different pet food ingredients, even those originating from the same animal (Swanson et al, 2017). The Norwegian article claims the heat treatment for creating meat meals undergoes a statutory requirement of 20 minutes at 133 degrees. However, this is only one element of the processing method, and does not encompass all types of heat treatments. Cooking and heating treatments reduce protein digestibility due to denaturation of proteins. Champion Petfoods uses low-temperature processing for many of our custom dried meat ingredients to maintain the proteins' structure. Additionally, Champion Petfoods uses low-temperature extrusion when making our Biologically Appropriate™ foods. Our unique extrusion technique features a custom steam injection system and gentle cooking process, preserving the nutritional integrity of the meat (Table 1.0).

## INGREDIENTS

The protein digestibility of meat meals is less than that of fresh meats because high heat processing denatures proteins, making them less available to the animal (Swanson et al, 2017). The blog states that the use of fresh meat does not improve digestibility of kibble. The values represented in table 2.0, show the total digestibility of Champion kibble

exceeds all processed and unprocessed meat ingredients from table 1.0. Unmatched by any other dog or cat food, ORIJEN and ACANA's Fresh Regional Ingredients rival Mother Nature. Our foods supply nutrients in their freshest, most natural and nourishing form. This variety is lost in conventional dog and cat foods, which often feature a single animal ingredient, such as chicken or lamb, that's highly processed and seldom authentically fresh.

The use of fresh and raw meats in ORIJEN and ACANA dog and cat food is one way Champion Petfoods has set itself apart in the industry. Traditional pet foods use little to no fresh meat; instead, they use high-temperature-rendered meat meals to achieve a desired protein level and animal ingredient target. We are committed to the health and well-being of your pets and to nourishing them as Mother Nature intended.

  
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## APPENDIX

**Table 1.0-** Adapted from Swanson *et al*, 2017, the table shows the digestibility of different ingredients based on their processing method. All values are approximate. Steaming increases digestibility of raw chicken due to the breakdown of connective tissues. Total protein digestibility not reported; individual amino acid digestibility reported on poster, not transcribed above.

Table 1.0 - Ingredient Digestibility	Total Digestibility
Chicken Meal	60%
Raw Chicken	76%
Steamed Chicken*	77%
Retorted Chicken	73%

\*Closest to our cooking process

**Table 2.0-** Digestibility of various NorthStar® and DogStar® ORIJEN and ACANA diets. All fall within extremely close range of one another.

Table 2.0 - Kibble Digestibility	Protein Digestibility	Fat Digestibility	Total Digestibility
Orijen Original	89.1%	94.8%	84.3%
Orijen Six fish	86.3%	95.4%	83.3%
DS ACANA Free Run Poultry	87.1%	95.9%	85%
NS ACANA Prairie Poultry	87.2%	95.2%	86.2%
NS ACANA Pacifica	86.9%	95.9%	83.8%
DS ACANA Wild Atlantic	88.5%	94.7%	83.6%

## REFERENCES

Swanson, K.S., Utterback, P., & Parsons, C.M. 2017. Chemical composition, nutrient digestibility, and true metabolizable energy of differentially processed chicken-based pet food ingredients using the precision fed cecectomized rooster assay. Poster presented at: ASAS-CSAS annual meeting and trade show 2017.

  
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