

Beyond the Guaranteed Analysis COMPARING PET FOODS

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The guaranteed analysis found on all pet foods sold under AAFCO guidelines cannot be used to compare one pet food to another.

The macronutrients listed are reported as minima and maxima, instead of the actual amount typically found in the food, and values listed are a percentage of weight as-fed. Diets vary in moisture and fiber content, creating differences in the number of calories per unit of weight (caloric density).

Pets are fed by calorie, not by weight, so comparisons should ideally be expressed in the amount of a particular

nutrient per calorie.

- Typical content of protein and fat can be estimated by adding 1.5% to the protein minimum and 1% to the fat minimum.¹
- This information can be subsequently used to determine grams of protein and fat per 1000 kcal—the preferred unit for pet food comparison.²

Any 2 pet foods can be accurately compared when the caloric basis is either calculated as described (Table 1) or:

- Obtained from manufacturers or via consultation services
 - Found online or in product guides.
- A general comparison tool for commercial pet foods is provided along with the suggested dietary concentrations established by a research panel (Table 2).² An example is provided that illustrates the method of comparison using the labels from 2 commercial products (Table 3).

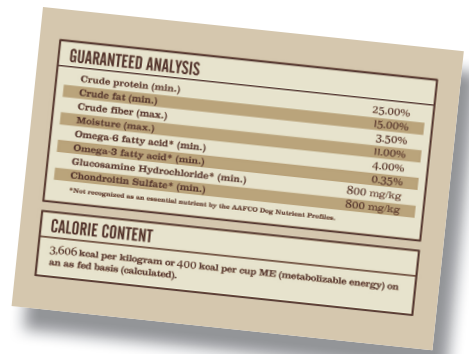


TABLE 1. STEP BY STEP: ESTIMATING NUTRIENT CONCENTRATION ON A CALORIC BASIS

Step 1	<ul style="list-style-type: none"> • Add 1.5% to protein percentage from pet food label • Add 1% to fat percentage from pet food label
Step 2	Divide kcal/kg by 10,000
Step 3	Divide estimated protein % and fat % by number obtained in Step 2

TABLE 2. COMPARISON OF PET FOODS BY CALORIC BASIS

Canine Diets	NRC RA* (g/1000 kcal)	Low (g/1000 kcal)	Moderate (g/1000 kcal)	High (g/1000 kcal)
Protein	25	< 60	60–90	> 90
Fat	13.8	< 30	30–50	> 50
Carbohydrate	n/a	< 50	50–90	> 90
Feline Diets	NRC RA* (g/1000 kcal)	Low (g/1000 kcal)	Moderate (g/1000 kcal)	High (g/1000 kcal)
Protein	50	< 80	80–120	> 120
Fat	22.5	< 40	40–60	> 60
Carbohydrate	n/a	< 35	35–70	> 70

*National Research Council recommended allowance²

TABLE 3. CONVERSION OF GUARANTEED ANALYSES + COMPARISON OF TWO COMMERCIAL DOG FOODS

Ingredient	PET FOOD 1 (DRY)	PET FOOD 2 (WET)
GUARANTEED ANALYSIS		
Crude protein (min)	25%	8%
Crude fat (min)	15%	5%
CALORIE CONTENT		
kcal/kg	3606	1198
CONVERSION		
Protein	<ol style="list-style-type: none"> 1. 25% + 1.5% = 26.5% 2. 3606 kcal/kg / 10,000 = 0.3606 3. 26.5 / 0.3606 = 74 g/1000 kcal 	<ol style="list-style-type: none"> 1. 8% + 1.5% = 9.5% 2. 1198 kcal/kg / 10,000 = 0.1198 3. 9.5 / 0.1198 = 79 g/1000 kcal
Fat	<ol style="list-style-type: none"> 1. 15% + 1% = 16% 2. 3606 kcal/kg / 10,000 = 0.3606 3. 16 / 0.3606 = 44 g/1000 kcal 	<ol style="list-style-type: none"> 1. 5% + 1% = 6% 2. 1198 kcal/kg / 10,000 = 0.1198 3. 6 / 0.1198 = 50 g/1000 kcal
FINAL RESULT	Moderate protein / moderate fat	Moderate protein / high fat

References

1. Hill RC, Choate CJ, Scott KC, et al. Comparison of the guaranteed analysis with the measured nutrient composition of commercial pet foods. *JAVMA* 2009; 234(3):347-351.
2. National Research Council Ad Hoc Committee on Dog and Cat Nutrition. *Nutrient Requirements of Dogs and Cats*. Washington, DC: National Academies Press, 2006.

This information can be downloaded and printed for use in your practice at todaysveterinarypractice.com.