Determining the amount of Protein and other Ingredients on a Dry Matter basis

To determine the amount of dry matter in a bag of kibble, canned food, or raw food:

Take a look at the Guaranteed Analysis on the package. Then find the moisture content, for example: 75% water.

100%(of the ingredient contents of package) – 75%(water) = 25% dry matter

To determine the amount of protein on a **dry matter basis**, simply divide the reported amount of protein (in this case, 10%) by the total amount of dry matter (25%) in the can.

Then, multiply the result by 100.

Dry Matter Protein Content = (10/25) x 100 = 40%

By the way, this same method for computing dry matter basis works for **any other nutrient**, too.

When you're comparing canned food to dry kibble, the issue becomes critical.

For example, say you'd like to compare two products — a can of dog food or raw food with a bag of kibble.

The canned or raw "wet" product lists protein content at 10% and the dry kibble reports protein at 23%.

At first glance, the kibble looks like it contains more protein. Right?

Well, now, let's use dry matter to level the playing field.

Using Guaranteed Analysis, the wet food shows a water content of 75% and the kibble, just 10%.

Now, let's remove all the water from both dog foods. Take a look at the protein values after converting the data to dry matter basis…

Guaranteed Analysis				Dry Matter Basis		
Nutrient	Canned	Kibble		Nutrient	Canned	Kibble
Protein	10%	23%		Protein	40%	26%
Fat	7%	10%		Fat	28%	11%
Fiber	3%	5%		Fiber	12%	6%
Water	75%	10%		Water	0%	0%

The canned product now lists 40% protein, compared to kibble's 26% figure? The wet food contains much more protein — on a dry matter basis — than does the kibble.

The Bottom Line

On the surface, when reading a package label, canned or raw dog or cat foods almost always look inferior to their kibble counterparts.

However, looks can be deceiving.

So, don't be fooled by a dog/cat food label's protein or fat numbers. When comparing the nutrient content of two or more dog/cat foods, be sure to first convert the labels' figures to dry matter basis.