

## FACT SHEET

### Comparison Of Protein Levels In Dry Food And Moist Food

Many people, whilst trying to gauge nutritional quality of a diet, will try to compare protein levels in dry food against protein levels in moist food and end up wondering why there is such a vast difference.

First of all it has to be appreciated that levels given in dry food, are given on a "dry matter" basis – this is because dry food, by definition, has had most of the moisture content removed. Moist food has a higher moisture level, normally somewhere between 75% - 85%.

Levels of ingredients declared in moist food include the moisture content and hence will be significantly lower than the same dry matter would provide. But the most important thing is to look at food on an "as fed basis", and the mg of protein, calorific value and digestibility of the ingredients when fed in the recommended amounts.

It is possible (in theory) to draw a comparison between the dry and moist food declared nutrient levels using the following example: Naturediet food, for instance, has a moisture content of approximately 75%, which is the natural moisture content of the ingredients.

We do not add water to bulk out the content, the only water added is to facilitate the correct cooking of the rice. If we were to bring this down to a dry matter basis (theoretically) to liken it to dry food, the content would be 4 times the declared percentages, this is because there is approximately 75% moisture in the product and 25% dry matter.

But, within this equation there are other important considerations. For example, percentage of protein only reflects percentage of nitrogen, which has nothing to do with the amino acid quality of the protein, and hence the digestibility. High quality, natural protein is a well-digested substance, simply and logically because evolution has seen the development of enzymes, which maximise the digestibility of natural foodstuffs.

High quality protein leaves little residue after digestion and is almost completely utilised by the body. Lower quality, less natural, or highly processed proteins are not so well or so completely digested and leave residue and waste produce. This waste has to be broken down by the liver and excreted by the kidneys, placing a stress on their resources.

High quality, minimally processed protein (such as found in Naturediet products), fed in the correct quantities, is essential for the health of all dogs and cats. Protein only becomes a problem to healthy pets if the protein itself is of a type that is not readily digested by a healthy digestive system.

It has to be appreciated that many of the processing methods, such as extrusion, used in the manufacture of most dry foods, denatures and changes the original protein. This can result in lower digestibility and the onset of some of the problems associated with excess waste protein in the body.

It is a myth that animals with liver and kidney problems should be fed little protein. These animals need protein to help repair the damaged organ tissue, and also an amount for maintenance. However, in these instances the quality and source of the protein fed is of paramount importance. Namely – high quality natural protein (organ or muscle meat) minimally processed and fed in the correct quantity for the animal's weight, age and assessed metabolic activity.

As a rule of thumb, "high protein" diets are not a problem to dogs, but high levels of poor quality, over-processed protein sources in food certainly are a recipe for trouble!

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