



February 28, 2014

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COC/Sample Integrity: Acceptable / No Concerns

Laboratory# G1156

**Confidential Laboratory Report**

**Blood Chemistry Study – Glycemic Index Feed Study - Carna4 Duck Dry Dog Formula**

The Glycemic Index ranks foods and beverages based on how they affect blood sugar level. Foods are scored on a scale of 0 to 100. Only foods and beverages containing carbohydrates are ranked, since they have the biggest effect on blood sugar. Foods that are ranked by the Glycemic Index are given scores:

- 1) High: >70 2) Medium: 56 to 69 3) Low: <55

A high Glycemic Index is undesirable. Foods with high Glycemic Index are rapidly digested. This causes a spike in the blood sugar, which may then be followed by a rapid decline in blood sugar, creating wide fluctuations in blood sugar levels. In contrast, items with a low glycemic index are digested slowly, raising blood sugar in a more defined, regulated and gradual way. Low Glycemic Index foods are absorbed slowly; staying in the digestive tract longer. Low glycemic foods control appetite, delay hunger cue and balance metabolism. Balanced blood sugar also can help reduce the risk of insulin resistance.

The Glycemic Index (GI) is a measure of the energy of food (carbohydrates) that raises glucose levels after postprandial. Mortec’s Clinical Study Division utilizes in-house and recognized validated methodologies. We do not provide theoretical analytical reports based on the components/ingredients and the known Glycemic Index of the ingredients/food composition. We utilize a live feed study with animals whose owners have volunteered to participate in the trial. All dogs were healthy; no animals underwent any invasive procedures, none were harmed by participating in this test study. The owners were welcome to be present during the test in its entirety if they desired to do so.

The GI value of the food tested was determined by a feed study (10 healthy dogs participated). The protocol/procedure was to measure blood glucose levels preprandial and postprandial intervals in order to extrapolate information to establish the Glycemic Index of the food that is being studied. The food containing specifically weighted grams of digestible (available) carbohydrates is fed and measured to see the effect on the dog’s blood glucose levels over specified time. The computerized instrument used for the study was a blood glucose analyzer specifically designed for dogs and cats. Upon establishing a value our nutritional program calculates the level through internal ingestion of the Carna4 food being tested. The final Glycemic Index (GI) value for the food is averaged out based on the results of the 10 dogs in the study.

Food with high GI levels contains rapidly digested carbohydrates, producing large quick peak rise and fall in blood glucose. Foods that have a low GI level contain sluggish digested carbohydrates, which producing a gradual and relatively low rise in blood glucose levels. Below is the result of Carna4 Duck Dog Food as analyzed for its Glycemic Index (GI). NG Adapt Software was used to aid in the calculation of results obtained.

**Sample 1: Carna4 Duck Dry Dog Food (Composite of 4 Production Dates)**

- Clinical Testing Note: The Average was Taken from 10 Healthy Dogs

<b><u>TESTING CONDUCTED</u></b>	<b>Glycemic Index (GI)</b>
Glycemic Index (GI)	48

Method Cite: MGGI424

Approved By:

S. G.

Checked and Validated Prior to Sending