

Important Information About the Harlan-Teklad 88137 Western Diet Used in the Tabas Laboratory for Mouse Atherosclerosis Studies

The Tabas laboratory posed the following question to:

Barb Mickelson, PhD
Nutritionist/Technical Services
Harlan Teklad
2826 Latham Dr.
Madison, WI 53713
P: 608/230-2198
F: 608/277-2066
bmickelson@harlan.com

Question: What can you tell us about lot-to-lot variation for any of the components of the Harlan-Teklad 88137 "Western" diet. Even though the percent fat, cholesterol, protein, carbs, etc. are constant, we are concerned that some of the actual components may differ from lot to lot based upon availability of food stuffs at the time of diet manufacture.

Dr. Mickelson's Answer: The formula for TD.88137 NEVER changes. Obviously, the specific lot of a given ingredient will be different over time. However, given the nature of the refined ingredients used, this lot to lot variability is small. Each lot of casein that we bring in has a proximate analysis done (protein, fat, moisture) and a mineral panel (calcium, phosphorus, etc). With casein, I'd say the most variable component is the phosphorus, although I attribute some of that reported variability to the method of detection. However, even with this, I'd calculate the CV on the overall phosphorus level of the diet to be less than 5%.

I don't know what the variability in the anhydrous milkfat (the fatty acid profile) is. I imagine this will vary slightly as the cow's diet varies over the seasons of the year.

The corn starch and sucrose are highly refined and provide little else besides carbohydrate. The vitamins and minerals are of high quality grades. For some vitamins actual activity may vary some from lot to lot.

To control variability, for most ingredients the vendor and specific product number hasn't changed for many, many years. For instance, the casein always comes from the same source (New Zealand Milk Products), manufactured in the same way. The anhydrous milkfat always comes from the same manufacturer (Dairy Farmers of America).