



October 17, 2006

To: **National School Lunch Program Participants**

Subject: **Kellogg's® Morningstar Farms® Veggie Breakfast Sausage Patties  
28989 97152**

According to Appendix A to 7 CFR 210, 220, 225, and 226, an Alternate Protein Product (APP) must meet the following requirements: must be processed so that some portion of the non-protein constituents of the food is removed; must have a biological quality of at least 80 percent that of casein as determined by PDCAAS; and must contain at least 18 percent protein by weight when fully formulated or hydrated. Morningstar Farms Veggie Breakfast Sausage Patties contain protein that meets these requirements from soy, egg whites, and casein.

Soy protein is provided by soy flour chunks, soy protein concentrate, and soy protein isolate. These forms of soy protein have fat and carbohydrate components removed. Per our supplier, the reference used to determine the EAA score is the FAO/WHO 2-5 year old amino acid pattern. Per our supplier, the EAA score of the soy proteins is 1.04 with a digestibility of 97% giving a PDCAAS of 1. To achieve 18% protein when hydrated, soy flour chunks are hydrated with 1.9 parts of water, soy protein concentrate with 2.6 parts water, and soy protein isolate with 3.77 parts of water.

Egg white solids have water and fat removed. Data from FAO/WHO (1990) assigns egg whites an EAA score of 121 and digestibility of 98%, resulting in a PDCAAS of 1. Egg white solids are 81% protein and can be hydrated with 3.5 parts of water to achieve 18% protein when hydrated.

Sodium caseinate has water, fat, and sugar removed. Data from FAO/WHO (1990) assigns cows milk an EAA score of 127 and digestibility of 95%, resulting in a PDCAAS of 1. Sodium caseinate is 90% protein and can be hydrated with 4 parts of water to achieve 18% protein when hydrated.

The combined soy sources provide 17.8g hydrated soy protein per 41 gram pattie. The egg whites provide 9.1g hydrated protein per 41g pattie. The sodium caseinate provides 6.5g hydrated protein per 41g pattie. Total protein content from these combined sources is 33.4g. Therefore, each pattie provides 1 meat equivalent.

I certify the above information to be true and correct.

Cheryl L. Dolven, RD  
Nutrition Business Partner  
Kellogg Company