

thereof. The vegetable fat or oil is preferably taken from the group consisting of soy oil, corn oil, rapeseed oil, sunflower oil, palmolein, alone or in mixture. In a preferred composition, the rapeseed oil is canola oil. In the case of animal oil or fat, the source is preferably milk fat.

The protein source used in the composition is preferably whey protein, casein, a casein salt, or a mixture thereof. The ratio whey protein to casein and/or casein salt in a mixture can advantageously vary from 1:10 to 1:0.1, preferably from 1:4 to 1:0.25. For example, in one embodiment the ratio by weight of whey protein to casein and/or casein salt may range from 1:4 to 1:1.

The composition of the present invention contains protein that provides between about 20% and about 30% of the energetic content of the composition. The energetic contribution of fat and/or oil is between about 40% to about 50% of the energetic content of the composition. The energetic contribution of carbohydrate is between about 28% to about 32% of the energetic content of the composition. In a preferred embodiment, the composition of the present invention contains protein that provides between about 20% and about 30%, fat and/or oil that provides between about 44% to about 46%, and carbohydrate that provides between about 28%, to about 32% of the energetic content of the composition.

More specifically, the powder blend composition has an energetic amount of protein of around 25%, an energetic amount of fat or oil of around 45%, and an energetic amount of carbohydrate of around 30%.

The powder blend composition of the present invention typically has, by weight, between about 26% to about 36% of protein, between about 20% and about 30% of fat or oil, and between about 35% and about 45% of carbohydrate. In one preferred embodiment, the composition has, in weight percent, a fat content of about 25%, a protein content of about 31% and a carbohydrate content of about 40%.

In this preferred embodiment, the protein is a mixture of whey protein and casein, the carbohydrate is corn syrup, and the oil is canola oil.

The composition of the invention is prepared in the following way. An aqueous phase of the protein, the carbohydrate and the oil or fat is prepared. An emulsifier is advantageously added as needed. In one embodiment, the aqueous phase includes between about 0.8 and 1.2 parts fat or oil, between about 1.2 and 1.6 parts protein, between about 1.5 and 2 parts carbohydrate, between about 0.01 and 0.03 parts emulsifier, and between about 1.1 and about 1.7 parts water. The emulsifier is any food-grade emulsifier, preferably lecithin. The mixture is heated, i.e., preheated, then heated, for example, with steam. Advantageously, the mixture is heated to a temperature between about 70° C. and about 85° C. The mixture is then homogenized, and finally is spray-dried. The powder is advantageously free flowing. The powder is recovered and the filling/packaging can be carried out.

It is also possible to add in the composition of the invention further components, like a prebiotic, a flavor enhancer, and a thickener, alone or in combination.

The prebiotic compound known can be any known in the art. The flavor enhancer similarly can be any flavor enhancer known in the art. The thickener can be any thickener known in the art. The composition can also be supplemented with vitamins, minerals, micronutrients, and/or antioxidants. It may be advantageous to add these additives to the mixture prior to homogenizing and drying the powder. Alternatively, the powder of the present invention can be admixed with other powders, for example salts, minerals, and the like, and packaged.

The filling is carried out according to known procedures. It is either possible to fill in a large amount for the food-service area or for hospitals, or in smaller quantities for private use. In the case of the smaller quantities, it is convenient to have quantities for one meal or one day: so, in these cases, the dosages and packaging contain about 10 to 20 grams of the composition. The quantity is not a critical issue.

The powder blend product is preferably prepared and packaged to have a shelf-life at room temperature of at least 12 months. The composition of the invention is ready to use and can be easily dissolved, dispersed or sprinkled on the corresponding food, in solid or liquid form. It is clear that the dissolution is better in or on hot food.

The powder preferably is devoid of any flavor, or at the least has a neutral flavor, so that the powder can be admixed with a wide variety of food-stuffs without changing the flavor of the foodstuffs.

If you consider this addition every day, it is possible to reach a well balanced food intake for persons of a certain age. Because of the neutral taste, there is no influence on the taste of the basic food.

EXAMPLES

By way of example, a suitable composition according to the invention is as follows.

Example 1

A total of 1000 Kg of sodium caseinate, 230 kg of whey protein, 1500 kg of corn syrup and 870 kg of canola oil were dissolved in 1200 kg of water with 18 kg of lecithin as emulsifier. The mixture was preheated, and then steam heated at 77° C. The mixture was mixed sufficiently to become homogenized. The homogenized mixture was then spray-dried to obtain 3600 kg of the balanced powder blend composition. This composition had, in weight percent, a fat content of 25%, a protein content of 31% and a carbohydrate content of 40%. Concerning the protein content, the whey protein represents 20% (46 Kg) and the caseinate 80% (184 Kg). Considering the composition on the energetic point of view, the protein amount was 25%, the oil amount was 45% and the carbohydrate amount was 30%.

Example 2

A total of 20 g of the composition of Example 1 was added to a soup, wherein it brings the necessary lack of calories and protein. The composition dissolved in the soup and there was no discernable taste difference from untreated soup.

What is claimed is:

1. A method of enhancing the energetic and protein content of a food without affecting the taste of the food, which comprise providing a powder composition of neutral flavor comprising at least one fat or oil source, least one protein source, and maltodextrin, wherein the energetic amount of protein is between about 20% and 30%, the energetic amount of fat or oil is between about 40% and 50%, and the energetic amount of maltodextrin is between about 25% and 35% of the composition; and adding the powder composition to a food wherein the powder composition does not change the flavor of the food.

2. The method of claim 1, wherein the food is a soup, a gravy, a vegetable, a meat, cooked potatoes, or liquid coffee.

3. The method of claim 1, wherein the food is milk, ice cream, or a beverage.

4. The method of claim 1, wherein powder composition further comprises an emulsifier.