

**BALANCED FOOD POWDER COMPOSITION****FIELD OF THE INVENTION**

The present invention concerns the use of a balanced food powder blend composition, more particularly to a neutral powder composition that contains a balanced quantity of carbohydrate, fat or oil, and protein.

**BACKGROUND OF THE INVENTION**

is known in clinical nutrition, such as in enteral feeding, to have a composition comprising a protein source, a carbohydrate source and a lipid source. This is the object of U.S. Pat. No. 5,589,468 concerning a liquid enteral feeding designed for elderly patients.

U.S. Pat. No. 5,916,612, the entire contents of which is incorporated herein by reference, describes a granular food product for preparation of instant foods that is prepared by mixing an oil or fat with an edible carbohydrate and/or protein powder materials to obtain a first mixture, and then further edible carbohydrate and/or protein powder materials are mixed with the first mixture to obtain a second mixture which is powdery or dough-like and that mixture is formed into granules by moistening and particle-to-particle contacting, and then the granules are dried.

The present invention relates to production of a free flowing and rapidly dispersible and/or soluble granular food product.

There are also commercially available on the market products providing either proteins, calories, or both, but these products do not provide a balanced blend of nutrients, they alter the taste of food, and they are not cost effective sources of either calories or proteins.

What is needed is a composition for normal human consumption, which can be directly and simultaneously added to a meal.

**SUMMARY OF THE INVENTION**

It is an object of the present invention to provide to the consumer a product which can be added to a meal, wherein the product has a balanced caloric and protein content, is not expensive, and does not alter the taste of the basic food. All these objectives are met according to the invention which concerns the use of a balanced powder blend composition that includes at least one fat or oil source, at least one carbohydrate source, and at least one protein source, wherein said composition is added to a food.

In one aspect, the invention includes a balanced powder composition for adding to food. The balanced powder composition includes at least one fat or oil source, at least one carbohydrate source, and at least one protein source. The balanced powder composition is substantially devoid of flavor so that it can be admixed with different foodstuffs without substantially changing the flavor or texture of the foodstuffs. The balanced powder composition has an energetic amount of protein between about 20% and 30%, of fat or oil between about 40% and 50%, and of carbohydrate between about 25% and 35%. The balanced powder composition may further include an emulsifier at between about 0.1 to about 1% by weight. In one preferred embodiment, the carbohydrate source includes maltodextrin, the fat or oil source includes canola oil, and the protein source includes whey protein, casein, a casein salt, or a mixture thereof.

In a second aspect of the invention, the invention includes a method of manufacturing the above-described balanced

powder composition. The method includes admixing between about 0.8 and 1.2 parts fat or oil, between about 1.5 and 2 parts carbohydrate, between about 1.2 and 1.6 parts protein, between about 0.01 and 0.03 parts emulsifier, and between about 1.1 and about 1.7 parts water to form a mixture. This mixture is then heated to between about 70° C. and about 85° C. Of course, individual components and/or the mixture may be preheated. The next step involves homogenizing the mixture. Finally, the homogenized mixture is dried to form a free flowing powder, for example by spray drying. The powder composition has a neutral flavor and is substantially devoid of flavor when admixed with another food.

In a third aspect of the invention, the invention includes a method of enhancing the nutritional value of a food. The method includes the steps of providing a powder composition of neutral flavor comprising at least one fat or oil source, at least one carbohydrate source and at least one protein source; and adding the powder composition to a food, and wherein the powder composition does not change the flavor of the food.

**DETAILED DESCRIPTION OF THE INVENTION**

The composition of the invention is a balanced powder blend composition, where the balance concerns both the energetic content as well as the protein content. This is a product which can be very conveniently used: the consumer has only to sprinkle it on or admix it with the considered food. The product enhances the basic food by reducing the possible deficiencies of the basic meal of certain persons.

The powder blend composition of the present invention can be used in all different types of food, including both hot food and cold food. For example, concerning hot food, it is possible to use the composition in a soup, in a gravy, on vegetables, on a meat or incorporated into a meat, on cooked potatoes and also in liquids, for example coffee or tea. Exemplary use with cold food includes adding the composition to milk or to ice-cream.

The composition of the present invention can be used in hospitals, in the food service area, in the clinical nutrition area, and also for private use. The product can also be used as a food supplement in various nutraceutical formulations and beverages.

As stated above, one objective of the invention is to have an absolutely neutral composition, so that it is possible to use the composition very broadly. The composition is advantageously tasteless, or contains a very neutral flavor that is easily masked by other foods.

In one embodiment, there are no vitamins and/or mineral supplements added to the composition, so that it is possible to keep the price of said product very low. But, it is also possible to add in the composition of the invention vitamins and/or minerals. In one embodiment, the composition provides at least 100% of the USRDA of selected vitamins and minerals.

In one embodiment, there is no dietary fiber added to the composition. Fiber may interfere with using the composition with various foods. In one embodiment, the composition may contain a soluble fiber.

The carbohydrate source used in the composition is preferably maltodextrin. The use of other carbohydrates may lead to a too sweet product. Any type of maltodextrin can be used, for example maltodextrin from corn syrup or any other vegetable material.

The fat or oil source used in the composition can be either a vegetable fat or oil or an animal fat or oil or a mixture