

CALORICALLY DENSE LIQUID ORAL SUPPLEMENT

BACKGROUND OF THE INVENTION

The present invention generally relates to a composition for providing nutrition. More specifically, the present invention relates to liquid oral supplements having increased caloric and protein content.

The human body requires energy to perform its vital functions, such as blood circulation, immune processes, respiration processes, etc. Energy can be supplied in the form of calories. Calories are typically supplied by the consumption of food. Calorie sources can be classified into three categories: proteins, fats, and carbohydrates. Proteins can provide the body with support for muscular activity; fats can provide the body with stored energy; and carbohydrates can supply the body with immediate energy. Essential vitamins and minerals are necessary to help regulate the processes of the human body.

An individual needs to receive a proper balance of nutrients to sustain health; otherwise, malnutrition can result in a variety of physical complications. Moreover, it is imperative that the support provided be adapted to the needs of an individual. For example, patients who are ill require increased and specialized nutritional support. An increase in specific nutrients can help the body recover from a particular stress placed upon it.

Nutritional needs can also change with a person's age. For example, elderly individuals show a decrease in the amount of energy their body requires from fat sources. This is attributed to a decrease in the number of functioning cells an elderly individual has. This is also attributed to a decrease in activity. Accordingly, an elderly individual's nutritional requirements may be different than a young or middle aged individual.

Because at least certain individuals may not receive their required nutritional support from a normal diet, nutritional supplements have been designed to provide nutritional support to individuals. The supplements can be directed towards a particular type of nutritional support. For example, a supplement may provide an individual with additional calories for increased energy. Although these supplements provide a certain amount of nutritional support, it is in the best interests to provide a composition having increased nutritional value for a specific nutritional requirement.

In the above examples of elderly individuals and ill patients, it is desired to provide nutritional supplements having increased energy as well as increased protein per serving. In this regard, although an elderly individual's energy needs may be reduced, their ability to consume products may also be diminished. For example, they may have difficulty consuming a product due to, e.g., swallowing difficulties. Further, certain disease states or conditions may require restrictions on the diet a patient consumes. For example, renal patients may have fluid restrictive diets.

However, increasing both calories and/or protein in a nutritional supplement can increase the overall viscosity of the supplement. This can make the supplement difficult to consume or administer, and can also diminish the taste of the supplement.

Therefore, a need exists for improved oral supplements, for example, with an increased amount of protein and calories per ml for an elderly individual or ill patient.

SUMMARY OF THE INVENTION

The present invention provides a calorically dense liquid oral supplement. In an embodiment, the supplement is

designed to help to meet the nutritional needs of elderly individuals as well as patients with certain disease states. The supplement provides an increased amount of calories per ml while providing a sufficiently low viscosity to allow the supplement to be easily consumed orally or be administered by tube feeding or other like manner. In addition, the taste of the supplement is not diminished despite the increase in calories and protein.

To this end, in an embodiment of the present invention, a liquid nutritional product is provided that includes a protein source that provides at least 15% of the total caloric content of the product. The protein source includes caseinate and soy. The product has a caloric density of at least 2.25 calories per ml.

In an embodiment, the liquid nutritional product includes a prebiotic, such as fructooligosaccharides.

In an embodiment, the protein source comprises at least 90 grams per liter of product.

In an embodiment, the fat source comprises at least 50% of the caloric content.

In an embodiment, the product has a viscosity of 100 centipoises or less.

In another embodiment of the present invention, a liquid nutritional product is provided having a protein source that provides at least 16% of the total caloric content of the product and includes caseinate and soy protein isolate. In addition, the product includes a fat source that provides at least 40% of the caloric content, and a carbohydrate source that provides at least 25% of the caloric content. The product has a caloric density of at least 2.25 calories per ml.

In yet another embodiment of the invention, a method for providing nutritional support to a patient is provided comprising the steps of administering a nutritional supplement to an individual requiring same. The nutritional supplement comprises a protein source that provides at least 15% of the total caloric content of the product and includes caseinate and soy. The product has a caloric density of at least 2.25 calories per ml. The amount of product administered is in the range of approximately 25 to about 100 ml per serving.

In an embodiment, the individual is an elderly individual.

In an embodiment, the individual is recovering from a disease state.

In an embodiment, the individual is stressed.

It is, therefore, an advantage of the present invention to provide an improved liquid oral supplement.

Moreover, an advantage of the present invention is to provide a nutritional supplement for an elderly individual.

Furthermore, an advantage of the present invention is to provide a nutritional product for individuals suffering from a disease state or recovering from a disease state.

Another advantage of the present invention is to provide a liquid oral supplement which provides an increased amount of protein.

Still another advantage of the present invention is to provide a liquid oral supplement which may be easily consumed.

Yet another advantage of the present invention is to provide a liquid oral supplement that provides an increased amount of calories per ml.

Another advantage of the present invention is to provide a liquid oral supplement having a taste acceptable to an individual.

Still another advantage of the present invention is to provide a liquid oral supplement having a low viscosity despite having an increased amount of protein.