

and wherein the pH of said nutritional supplement beverage is in the range of from about 2.8 to about 3.3, and wherein the caloric density of said nutritional supplement beverage is at least 1.00 kcal/ml and wherein said nutritional supplement beverage is essentially devoid of added macro-nutrients and fat and wherein the liquid nutritional supplement is produced through a method comprising the steps of:

- (i) preparing (a) an acidified aqueous solution of whey protein isolate having a pH of about 2.8 to about 3.3 and (b) an aqueous solution of at least one source of carbohydrate;
- (ii) adding the aqueous solution of at least one source of carbohydrate to the acidic aqueous solution of whey protein isolate so as to produce a combined solution.

2. A nutritional supplement beverage according to claim 1 wherein said whey protein isolate is present in the range of from about 3% to about 5% by weight.

3. A nutritional supplement according to claim 1 wherein in the ready to feed form it has a viscosity of less than 15 centipoise as determined by a Brookfield viscometer at 72° F. using a #1 spindle at 60 RPM.

4. A nutritional supplement beverage according to claim 1 wherein at least one source of carbohydrate is selected from the group consisting of sucrose, glucose, maltodextrin, fructose, and corn syrup solids.

5. A nutritional supplement according to claim 4 wherein the maltodextrin has DE of at least 15.

6. A nutritional supplement beverage according to claim 1 wherein the pH of said nutritional supplement beverage is adjusted by a mixture of HCl, malic acid, and citric acid.

7. A nutritional supplement according to claim 1 wherein the source of carbohydrate consists of a mixture of maltodextrin and sucrose.

8. A liquid nutritional supplement beverage according to claim 1 wherein the caloric density is at least 1.20 kcal/ml as fed.

9. A liquid nutritional supplement beverage according to claim 1 wherein the caloric density is at least 1.25 kcal/ml as fed.

10. A method of producing a substantially clear, liquid nutritional supplement beverage, comprising the following steps:

- (1) preparing (a) an acidified aqueous solution of whey protein isolate having a pH of about 2.8 to about 3.3 and (b) an aqueous solution of at least one source of carbohydrate having a DE of at least 10;
- (2) adding the aqueous solution of at least one source of carbohydrate to the acidic aqueous solution of whey protein so as to produce a combined solution.

11. A nutritional supplement beverage produced in accordance with the method of claim 10.

12. The method of producing nutritional supplement beverage according to claim 10, wherein the acidified aqueous solution of whey protein is prepared by using at least one acid selected from the group consisting of hydrochloric and

phosphoric acid; and at least one acid selected from the group consisting of citric, malic and lactic acids.

13. A substantially clear liquid nutritional supplement comprising:

- (1) water;
- (2) from about 3% to about 5% by weight of whey protein isolate;
- (3) a source of carbohydrate comprising a mixture of sucrose and maltodextrin with a DE of at least 15 and wherein the carbohydrate is 15–25% sucrose and 65–85% maltodextrin by weight;
- (4) vitamins, trace minerals and ultra trace minerals;
- (5) flavors and food grade colors;
- (6) an acid system comprising a mixture of hydrochloric, malic and citric acids; and wherein the pH of said nutritional beverage is in the range from about 2.8–3.0; and wherein the caloric density of said nutritional supplement beverage is at least 1.20 kcal/ml and wherein said nutritional supplement beverage is essentially devoid of added macro-nutrients and fat and wherein the liquid nutritional supplement is produced through a method comprising the steps of:
 - (i) preparing (a) an acidified aqueous solution of whey protein isolate having a pH of about 2.8 to about 3.3 and (b) an aqueous solution of at least one source of carbohydrate;
 - (ii) adding the aqueous solution of at least one source of carbohydrate to the acidic aqueous solution of whey protein isolate so as to produce a combined solution.

14. A substantially clear, liquid nutritional supplement prepared by the method comprising:

adding an aqueous solution of at least one source of carbohydrate having a DE of at least 10, to an acidified aqueous solution of whey protein isolate having a pH of about 2.8 to about 3.3 so as to produce a combined solution having a caloric density of at least 1.00 kcal/ml, having from about 1% to about 10% by weight whey protein isolate and being essentially devoid of added macro-nutrients and fat; and optionally adding vitamins, trace minerals and ultra trace minerals.

15. A substantially clear, liquid nutritional supplement comprising:

an acidified aqueous solution of whey protein isolate having a pH of about 2.8 to about 3.3 to which has been added an aqueous solution of at least one source of carbohydrate having a DE of at least 10, to produce a combined solution having a caloric density of at least 1.00 kcal/ml, having from about 1% to about 10% by weight whey protein isolate and being essentially devoid of added macro-nutrients and fat; and optionally including vitamins, trace minerals and ultra trace minerals.