

TABLE 6-continued

| | |
|----------------------------------|-------------|
| Preparation of Comparative Ex. 3 | 1.4 ± 0.5 |
| Preparation of Ex. 24 | 3.9 ± 0.6** |
| Preparation of Comparative Ex. 4 | 1.4 ± 0.5 |

In the table, ** denotes a significant difference from the corresponding Comparative Example at P<0.01.

It will be apparent from the above table that all the compositions prepared in the examples of the invention are significantly superior to those prepared in the comparative examples in organoleptic evaluation and that they are enteric nutritive preparations quite satisfactory in taste and odor.

Test Example 8

Pharmaceutical stability test of the enteric feeding compositions of the invention

The powdery anticancer enteric feeding compositions obtained in Example 1 and control powdery preparations a and b prepared in the following manners were compared in regard to appearance, solubility and state of emulsion.

Preparation of control powdery preparation a

In 5000 ml of purified water were dissolved 600 g of dextrin (Matsutani Chemical).

On the other hand, 10 g of soya lecithin (Epikuron 100, Nihon Sieber Hegner) were dissolved in 222 g of soybean oil (Nippon Oils and Fats) with heating, while 30 g of sucrose fatty acid ester (DK-F160, Daiichi Kogyo Seiyaku, HLB=15) were dissolved in 1000 ml of purified water similarly with heating. The three solutions were combined and spray-dried as in Example 1 to give 780 g (100%=862 g) of a powder.

To 430 g of the above powder were added 1500 g of granulated dextrin, an amino acid mixture (one-half of the composition of Example 1) and a homogeneous mixture of the same minerals and vitamins as used in Example 1 in 100 g of granulated dextrin and the whole mixture was homogenized to give a powdery nutritive composition (control powdery preparation a).

Preparation of control powdery preparation b

In 5000 ml of purified water were dissolved 3800 g of dextrin (Matsutani Chemical), an amino acid mixture of the same composition as that used in Example 1, and minerals and vitamins (twice the amounts used in Example 1) with heating.

On the other hand, 10 g of soya lecithin (Epikuron 100, Nihon Sieber Hegner) were dissolved in 222 g of soybean oil (Nippon Oils and Fats) with heating, while 30 g of sucrose fatty acid ester (DK-F160, Daiichi Kogyo Seiyaku, HLB=15) were dissolved in 1000 ml of purified water. The three solutions were combined and spray-dried as in Example 1 to give a powdery nutritive composition (control powdery preparation b).

The respective preparations were evaluated and tested for appearance, solubility and emulsion state. Thus, the appearance of each powder was visually inspected immediately after preparation. Then, 250 g of each powder was put in an enteral dosing bag (made of polyvinyl chloride) and, after 880 ml of water were added, shaken to mix for about 1 minute. The solubility was then evaluated by visual inspection. The state of emulsification of the liquid was also visually inspected and the diameter of emulsion particles was measured using a laser particle analyzer (Otsuka Electronics). In addition, the mixed fluid was allowed to

stand at room temperature for 48 hours and the state of the fluid was then visually evaluated.

TABLE 7

| | Preparation of Example 1 | Control powdery preparation a | Control powdery preparation b |
|-------------------------------|-----------------------------------|---|-------------------------------|
| Appearance of powder | Light yellow | Light yellow | Yellow |
| Solubility | Rapidly dispersed and homogenized | Small insoluble masses afloat on the liquid surface | Flocculation occurred |
| State of emulsion | Homogeneous and stable | Abundant insoluble matter | Homogeneous and stable |
| Emulsion particle size | 190 nm | 450 nm | 200 nm |
| State of fluid after 48 hours | Homogeneous and stable | Small insoluble masses afloat on the liquid surface | Separated into two layers |

We claim:

1. A composition for enteric absorption which comprises a powder, obtainable by emulsifying a fat in an aqueous solution of protein source amino acids and spray-drying the resulting oil-in-water emulsion, and granulated dextrin, which composition forms a stable oil-in-water emulsion when mixed with water, wherein said protein source amino acids comprise, in free amino acid equivalent amounts,

| L-Amino Acid | (g/100 g) |
|---------------------------------|-------------|
| Isoleucine | 2.58-10.30 |
| Leucine | 4.21-16.82 |
| Lysine | 3.26-13.06 |
| Phenylalanine | 2.84-8.51 |
| Threonine | 1.89-5.67 |
| Tryptophan | 0.72-2.15 |
| Valine | 2.58-10.30 |
| Histidine | 1.46-4.38 |
| Arginine | 4.12-16.48 |
| Alanine | 2.15-8.58 |
| Aspartic acid and/or asparagine | 6.18-24.72 |
| Glutamic acid and/or glutamine | 10.31-41.22 |
| Glycine | 2.15-8.58 |
| Proline | 2.92-11.68 |
| Serine | 2.66-10.64 |
| Tyrosine | 0-3.0. |

2. The composition of claim 1, wherein the protein source amino acids comprise, in free amino acid equivalent amounts,

| L-Amino Acid | (g/100 g) |
|---------------------------------|-------------|
| Isoleucine | 2.58-7.73 |
| Leucine | 4.21-12.62 |
| Lysine | 3.26-9.80 |
| Phenylalanine | 2.84-8.51 |
| Threonine | 1.89-5.67 |
| Tryptophan | 0.72-2.15 |
| Valine | 2.58-7.73 |
| Histidine | 1.46-4.38 |
| Arginine | 4.12-12.36 |
| Alanine | 2.15-6.44 |
| Aspartic acid and/or asparagine | 6.18-18.54 |
| Glutamic acid and/or glutamine | 10.31-30.92 |