

Subsequent tests established that emulsion stability, as evaluated by reflectance measurements, decreases drastically when the pH of the liquid emulsion concentrate is above 4.0.

EXAMPLE V

Liquid emulsion concentrates having the following formulations were prepared according to the procedure of Example I.

Ingredient	Amount (gms)	
	A	B
Soybean Oil	30	30
Corn syrup solids	—	12.5
Starch derivative (dextrinized waxy maize acid ester of octenyl succinic acid anhydride)	50	37.5
Emulsifier	0.33	0.33
Water	43.3	43.3

Reflectance measurements were obtained on the resulting dried products as a 2% aqueous solution, with the following results:

Product Tested	% Reflectance (550 nm)
Sample A	53.2
Sample B	51
COFFEE-MATE	50

While the dried emulsion product of the present invention has been described as suitable for use as a coffee whitener, it is to be understood that it is also suitable for use in a variety of other dried, protein-free, non-dairy fat emulsion products which are intended to be reconstituted by the consumer prior to use. For example, the product of this invention may be used in preparing dried imitation sour cream mix, dried chip dip mix, dried creamy salad dressing mix, and the like. In such products, where an acidic taste is not objectionable, buffering salts need not be dry blended with the dried emulsion concentrate.

Although the present invention has been described with reference to specific examples, it will be understood that changes, modifications, variations of composition and procedure may be made by those skilled in the art within the principle and scope of the appended claims.

We claim:

1. A dry, protein-free coffee whitener which comprises

a dried emulsion concentrate containing from 0%–55% by weight of a water soluble carbohydrate,

from 0.2%–1.25% of an emulsifier, and

from 20%–50% by weight of an edible fat having an average particle size of about 1–3 microns in diameter, said fat being stabilized with a chemically modified dextrinized starch derivative having a lipophilic character in an amount sufficient to provide the product with a starch derivative to fat ratio of between about 0.4–1.25 to 1, and

a buffering salt in an amount sufficient to provide the product with a pH in the range of 6–7 when reconstituted.

2. The coffee whitener defined in claim 1 in which the chemically modified starch is a dextrinized starch acid-

ester of a substituted cyclic dicarboxylic acid anhydride.

3. The coffee whitener defined in claim 1 in which the whitener contains from 1% to 3% by weight of a buffering agent selected from the group consisting of phosphate and citrate salts and mixtures thereof which have a pH of from about 6–8.

4. The coffee whitener defined in claim 1 in which the whitener comprises a dried emulsion concentrate containing

from 20%–35% by weight of an edible fat having a melting point of about 110° F.–115° F., no more than about 1.25% by weight of an emulsifier, and

from 10%–35% by weight of a carbohydrate, said fat being stabilized with a dextrinized waxy maize acid-ester of a substituted succinic acid derived from octenyl succinic acid anhydride in an amount sufficient to provide a ratio of starch derivative to fat of 0.6–0.8 to 1, and

a buffering salt comprising from 2.0–2.5% by weight of a mixture of mono- and dipotassium phosphate salts having a pH of 6–8.

5. The coffee whitener defined in claim 1 in which the chemically modified starch derivative has a pH of about 2.5–3.0.

6. The coffee whitener defined in claim 1 in which the buffering salt is selected from the group consisting of phosphate and citrate salts.

7. The coffee whitener defined in claim 1 in which the chemically modified starch is a dextrinized waxy maize acid-ester of a substituted succinic acid derived from octenyl succinic acid anhydride.

8. The coffee whitener defined in claim 1 in which the dried emulsion concentrate has a pH of no more than about 4.0.

9. The coffee whitener defined in claim 8 in which the dried emulsion concentrate has a pH of from 3.5–4.0.

10. A method of preparing a stable, dry, protein-free coffee whitener which comprises

forming a liquid emulsion concentrate containing an edible fat having an average particle size of about 1–3 microns in diameter, an emulsifier, water and a chemically modified dextrinized starch having a lipophilic character, the emulsion concentrate containing sufficient fat to provide said concentrate, when dried, with a fat content of from 20%–50% by weight, and having a pH of no more than about 4.0 and a starch derivative to fat ratio of between about 0.4–1.25 to 1

drying the liquid emulsion concentrate, and admixing the dried emulsion concentrate with at least one buffering salt to provide the whitener with a pH of about 6–7, when reconstituted.

11. The method defined in claim 10 in which a fat phase containing fat and emulsifier and having a temperature of about 130° F.–140° F., and an aqueous phase containing the chemically modified starch derivative and having a temperature of about 150°–200° F. are combined and homogenized to provide a stable emulsion concentrate having a pH of no more than 4.0 in which the fat particles have an average diameter of about 1–3 microns, and the liquid emulsion concentrate is spray dried.

12. The method defined in claim 10 in which the dried emulsion concentrate is dry blended with from 2.0%–2.5% by weight of a mixture of mono- and dipotassium phosphate salts having a pH of 6–8.