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Example 7

The procedure of Example 1 is followed except that the protein, fat and lactose composition referred to as the "mixture" is further compounded with fortifying materials, vitamins, and other beneficiating components described and in the proportions shown in Patent 2,659,676, issued to Hartley W. Howard and Julius F. Muller on November 17, 1953. Thus the whole formula is that shown below. All components are sprayed in aqueous dispersion through nozzle 18 except the "lactose added as such" which is supplied in solution through nozzles 16 and 20.

Ingredient:	Percent in food
Skim milk (condensed to 21 to 26.5% solids) -----	33.2
Lactose added as such through nozzle 12 --	38.4
Palm oil -----	13.2
Coconut oil -----	6.6
Peanut oil -----	6.6
Lecithin -----	1.0
Calcium chloride -----	0.55
Potassium hydroxide -----	0.22
Methionine -----	0.15
Ferrous sulfate -----	0.03
Ascorbic acid -----	0.04
Niacin -----	0.005
Thiamine hydrochloride -----	0.0003
Riboflavin -----	0.0002
Vitamins A and D oil concentrate -----	0.0045
	100.0000

It is to be understood that it is intended to cover all changes and modifications of the examples of the invention herein chosen for the purpose of illustration which do not constitute departures from the spirit and scope of the invention.

We claim:

1. In spray drying, the process which comprises form-

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ing converging sprays of droplets of two different miscible solutions of fluid dairy products, one of which has a viscosity not more than 75% of that of the other solution, at such proximity and at such angle of convergence to each other that the sprays impinge under the force of spraying before the sprayed particles become dried over their exterior surfaces, and maintaining the merged droplets in suspension in a current of a drying gas until the droplets are dried.

2. In spray drying an aqueous dispersion of a dairy product and an aqueous solution of a sugar by forming converging separate sprays of said dispersion and said solution and maintaining the resulting merged droplets in suspension in heated air until dried, the improvement comprising converging said separate sprays in a current of heated air within an enclosed zone, said solution as sprayed being of viscosity substantially below that of said dispersion.

3. In spray drying an aqueous dispersion of a dairy product and an aqueous solution of a sugar by forming converging separate sprays of said dispersion and said solution and maintaining the resulting merged droplets in suspension in heated air until dried, the improvement comprising converging said separate sprays in a current of heated air within an enclosed zone, said solution as sprayed being of viscosity substantially below that of said dispersion, said dairy product being milk solids and said sugar solution being lactose.

4. The process of claim 1 which includes effecting said spraying of the more viscous of said solutions at a pressure 100%-400% higher than the pressure of spraying of the other solution.

References Cited in the file of this patent

UNITED STATES PATENTS

1,174,592	Lobeck -----	Mar. 7, 1916
2,353,459	Gruber -----	July 11, 1944
2,659,676	Howard et al. -----	Nov. 17, 1953
2,893,871	Griffin -----	July 7, 1959