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mm. Hg, but no heat was applied to the plates. The chicken loaf mix, which was in a soft, watery condition, expanded over 50% in volume before being frozen by the evaporation of the water. This resulted in a porous, open-type product which facilitated the removal of the rest of the water by sublimation. During the sublimation stage, the plates were heated to a temperature of 130° F., and the application of the heat and vacuum was continued for 14½ hours. The drying was discontinued when the moisture content was reduced below 2%. The resulting product was broken up into regular sized pieces to facilitate handling and packaging.

#### Example 2

A beef loaf was prepared by blending the following ingredients, which included fresh and partially dehydrated ingredients:

28 lbs. 5 oz. beef  
3 lbs. 7 oz. bread  
1 lb. 15 oz. water  
4 lbs. 8 oz. eggs  
3 lbs. 6 oz. celery  
2 lbs. 8 oz. onions  
1 lb. 6 oz. nonfat milk solids  
1 lb. 6 oz. hydrogenated shortening  
1 lb. 0 oz. margarine  
12 oz. tomato paste  
12 oz. high absorption nonfat milk solids  
325.7 gm. seasonings

The fresh and partially dehydrated ingredients were mixed with a little water and blended, and then the other ingredients were added. After mixing all the ingredients together, the entire mixture was passed through a grinder plate with ⅜" holes. Water was added to the product at the rate of 1½ lbs. per 6 lbs. of mix. This 1½ lbs. of water was estimated to equal about 40% of the water already contained in the mixed meat and food material. The mixture, after rehydration of the dehydrated ingredients, was then spread evenly on trays, and freeze-dehydrated as described in Example 1.

#### Example 3

A beef loaf was prepared by mixing together the following ingredients, which included fresh and partially dehydrated ingredients:

28 lbs. 5 oz. beef (⅜" ground beef chucks)  
3 lbs. 7 oz. bread (non-seasoned stuffing bread)  
1 lb. 15 oz. water  
4 lbs. 8 oz. eggs (fresh)  
3 lbs. 6 oz. celery (cleaned fresh, ⅜" diced stalks)  
2 lbs. 8 oz. onions (cooked, ground through ⅜" holes)  
1 lb. 6 oz. nonfat milk solids  
1 lb. 6 oz. hydrogenated shortening  
1 lb. 0 oz. margarine  
12 oz. tomato paste  
12 oz. high absorption nonfat milk solids

The fresh and partially dehydrated ingredients were mixed with a little water and blended, and then the other ingredients were added. Ten pounds of crushed ice were added during mixing and the entire mixture was then ground through a ⅜" grinder plate. This 10 lbs. of ice was estimated to equal about 30% of the water already contained in the mixed meat and food material. The mixture was then spread on dehydrator trays and freeze-dehydrated as described in Example 1.

#### Example 4

A meat loaf was prepared by mixing the following ingredients together:

14 lbs. 8½ oz. beef (beef chuck ground 1")  
2 lbs. 4 oz. eggs (fresh)  
¾ oz. celery (air dried celery stalk granules) (5% moisture)  
11 oz. milk (nonfat dry milk solids)

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11 oz. hydrogenated shortening  
8 oz. margarine  
6 oz. tomato paste  
6 oz. high absorption milk solids  
162.8 gm. seasonings  
1 lb. 11½ oz. bread (non-seasoned stuffing bread)

The fresh meat and eggs and partially dehydrated other ingredients were mixed with ice and blended by grinding and the other ingredients added. Five pounds of ice were added to the mix and mixed until the ingredients were distributed evenly. The total water added was estimated to equal about 20% of the water already contained in the meat and food material. The mixture of ice and meat loaf was ground together through a ⅜" grinder plate, and, after rehydration of the dehydrated ingredients, the mixture was spread evenly on dryer trays with 12 pounds per tray. It was then freeze-dehydrated as described in Example 1.

#### Example 5

A ham loaf was prepared by mixing together the following ingredients:

13 lbs. 6½ oz. ham (⅜" ground fully cooked hams)  
6 lbs. 2 oz. fresh pork (⅜" ground pork butts)  
10 oz. corn flakes  
1 lb. 6 oz. binder (milk solids, wheat germ and wheat gluten)  
3.2 gm. cloves  
3½ oz. brown sugar

The fresh meat and partially dehydrated other ingredients were mixed with ice and blended by grinding, and the other ingredients added. The ingredients were mixed together with 5 lbs. of crushed ice. The total water added was estimated to equal about 45% of the water already contained in the meat and food material. The mixture was then ground through a ⅜" grinder plate to facilitate rehydration, and spread evenly on dryer trays, 12 lbs. per tray, and freeze-dehydrated as described in Example 1.

The freeze-dehydrated meat mixes prepared as described above in Examples 1-5 can be readily prepared for cooking by mixing equal parts by weight of the meat mix and water. The rehydration will proceed very rapidly, and the meat mixes can then be cooked in the regular way. If desired, other ingredients can be added during or subsequent to the rehydration.

While in the foregoing specification this invention has been described in relation to specific embodiments thereof and many details have been set forth for the purpose of illustration, it will be apparent to those skilled in the art that the invention is susceptible to other embodiments, and that many of the details described herein can be varied considerably without departing from the basic principle of the invention.

We claim:

1. The method of preparing freeze-dehydrated meat mixes, comprising forming a mixture by combining from 30 to 85 parts by weight of ground fresh meat with from 15 to 70 parts of a partially dehydrated food material, said proportions being calculated on a dry basis, also incorporating a quantity of water in said mixture in addition to the water contained in said fresh meat and said partially dehydrated food material, said added quantity of water ranging from 10 to 50% of the water already contained in said meat and said food material, holding said mixture at a refrigerated non-freezing temperature until said food material has at least partially rehydrated, but without said food material absorbing all of said added water, then subjecting said mixture to evaporative freezing, the particles of meat and food material of said mixture at the start of said freezing step being coated with unabsorbed water, said mixture expanding in volume during said evaporative freezing step and becoming frozen in expanded condition, and thereafter drying the frozen expanded mixture by sublimation.

2. The method of claim 1 wherein said mixture expands