shall have a pleasing and desirable flavor and shall have the ability to transmit these qualities to the finished product.

### §58.331 Starter distillate.

The refined flavor components when used to flavor butter and related products. It shall be of food grade quality, free of extraneous material and prepared in accordance with good commercial practice.

# OPERATIONS AND OPERATING PROCEDURES

## §58.332 Segregation of raw material.

The milk and cream received at the dairy plant shall meet the quality specifications as indicated under §58.322. The milk and cream should be segregated by quality and processed separately in such a manner that the finished product will fully meet the requirements of a particular U.S. Grade or other specification, whichever is applicable.

## §58.334 Pasteurization.

The milk or cream shall be pasteurized at the plant where the milk or cream is processed into the finished product or by procedures as set forth by the Administrator.

(a) Cream for butter making. The cream for butter making shall be pasteurized at a temperature of not less than 165 °F. and held continuously in a vat at such temperature for not less than 30 minutes; or pasteurized by HTST method at a minimum temperature of not less than 185 °F. for not less than 15 seconds; or it shall be pasteurized by any other equivalent temperature and holding time which will assure adequate pasteurization. Additional heat treatment above the minimum pasteurization requirement is advisable to insure improved keepingquality characteristics.

Adequate pasteurization control shall be used and the diversion valve shall be set to divert at no less than 185  $^{\circ}\text{F}.$  with a 15 second holding time or its equivalent in time and temperature to assure pasteurization. If the vat or holding method of pasteurization is used, vat covers shall be closed prior to holding period to assure temperature of

air space reaching 5  $^{\circ}$ F. higher than the minimum temperature during the holding time. Covers shall also be kept closed during the holding and cooling period.

(b) Cream for plastic or frozen cream. The pasteurization of cream for plastic or frozen cream shall be accomplished in the same manner as in paragraph (a) of this section, except, that the temperature for the vat method shall be not less than 170 °F. for not less than 30 minutes, or not less than 190 °F. for not less than 15 seconds or by any other temperature and holding time which will assure adequate pasteurization and comparable keeping-quality characteristics.

### § 58.335 Quality control tests.

All milk, cream and related products are subject to inspection for quality and condition throughout each processing operation. Quality control tests shall be made on flow samples as often as necessary to check the effectiveness of processing and manufacturing and as an aid in correcting deficiencies in processing and manufacturing. Routine analysis shall be made on raw materials and finished products to assure adequate microbiological, composition and chemical control.

## § 58.336 Frequency of sampling for quality control of cream, butter and related products.

- (a) *Microbiological*. Samples shall be taken from churnings or batches and should be taken as often as is necessary to insure microbiological control.
- (b) Composition. Sampling and testing for product composition shall be made on churns or batches as often as is necessary to insure adequate composition control. For in-plant control, the Kohman or modified Kohman test may be used.
- (c) Chemical—(1) Acid degree value. This test should be made on churnings or batches from samples taken from the cream as often as is necessary to aid in the control of lipase activity.
- (2) Free fatty acid. This test should be made on churnings or batches from samples taken from the butter as often as is necessary to aid in the control of lipase activity.