The razor clam (Siliqua patula) found along the beaches of Oregon and Washington has long been a leading seafood product. Its radius of use, except in the canned form, has been very much limited, however, since it, like many marine foods, is very subject to spoilage of one form or another, either by bacterial activity or by chemical change.

In an endeavor to widen the use of this clam, freezing has been studied over a period of two and one-half years. This product offered several problems which have had to be solved. For example, the fat of the digger of the clam very easily turns rancid if exposed to the air very long. This rancid odor and taste is not harmful, and yet to a degree it spoils the product for consumption because it impairs the flavor and odor of the product to which the consumer is accustomed. A procedure whereby the razor clam can be preserved by freezing has been devised. This circular gives this procedure and brief discussions of factors affecting its quality.

**Harvesting Period**

Clams may be dug the year round. However the spawning season produces a clam of a somewhat inferior quality. During this time the clam is using its body constituents to develop the young; therefore the quality factors are not of the calibre desired. Adhering to the old rule of "using shellfish in the months having an 'r'" will give the clam digger a better product. In other words clams will be best if taken during the months from September through April.

**How Harvested - Handling Method**

The sand may be rinsed off the clam by hosing or by allowing to stand with slight agitation in a suitable container filled with fresh tap water. This latter method not only removes external sand but allows the clam to draw the water through its body thus voiding some internal sand. If time permits, this latter method will quite well remove nearly all sand from the interior.
However, in large scale production the internal sand is better removed by agitation washing of the meats.

Clams may be opened or shucked by one of three methods listed below in the order of their preference:

1. Open raw with knife.
2. Steam open by subjecting to quick complete steaming for 2-3 minutes at 212°F. or until such time as majority of clams open.
3. Dip in hot water for about 3 minutes, or until such time as most of clams open.

If time permits, a better end-product will be obtained when the first method of opening is employed. However, opening by steam or hot water is much faster for large scale operations. The degree of difference in quality between those opened raw and those opened by heat is comparatively slight. Thus the method of opening is to be determined by the operator.

**WASHING AND CLEANING**

The washing of clams is a most important step. Sand and grit must be removed with care. The outer protective skin is removed from the neck and body. The neck is cut open lengthwise to insure complete and thorough washing or cleaning. The neck may be removed, ground, and packed separately for chowder. The inner edge of the digger is slit lengthwise so that the dark liver and intestinal tract can be removed thoroughly. A strong spray of water will help this step. (It may be noted at this point that the soft tissue left inside the digger is the fat of this animal. It has been found that those clams having a slightly darker creamy color have a more pleasing flavor than those having a light colored fat. (This factor could be used as a quality factor in larger production operations.)

**PACKING METHODS**

After the thorough cleaning and washing, the clam meats are allowed to drain to free them of excess water. They are then ready for packing in a suitable container. Glass, wax-lined cartons, wax impregnated cartons, cellophane-lined cartons or tin containers may be used. The meats are next covered with a brine made of salt and water. In this step it is most important to attain complete coverage of the meat with the brine. A small portion of meat allowed to remain above the surface of the brine will cause drying of the meat during freezing storage. Brine percentages to be used may be between two and five per cent. However, a three per cent (3 3/4 oz. salt per gallon of water) has proved to be the most satisfactory. After the brine has been added, the container is sealed properly.
FREEZING METHOD

Two temperatures for freezing have been studied. These temperatures are -20°F. and 0°F. The latter temperature has proved to be the more satisfactory freezing temperature for the clam. The texture of the meat frozen at 0°F. is markedly better than that frozen at -20°F. A better flavor is also gained when the clam is frozen at 0°F. rather than -20°F. Storage of the frozen product should be at 0°F. or closely thereby. If preserved by this means, clams may be stored for a period of six to even nine or ten months if desired or necessary.