

Non Preservation Process

Size Modification processes: Reduction or growth in the size of a food product or a sub-component (e.g., fat homogenization in milk), to enable ease of use or prevent product degradation overtime.

Food Process	Purpose	Food Use Examples	Used at Home	Benefits	Drawbacks
Cutting, Chopping	Modifying the size, shape, or surface of a food product for ease of use or for further processing	Fruits and vegetables, cheese, meat, and grains	Yes	Makes it easy to consume (e.g., apples cut into smaller pieces) or process a food (e.g., chopped potatoes prior to mashing)	Potential loss of some beneficial components like vitamins; reduces shelf-life due to exposure of large surface area to air and microorganisms
Homogenization, Emulsification	Reducing the size of particles in a liquid (e.g., fat in milk) by passing the liquid through an orifice or moving rotor via shear to break the particles into smaller size	Milk, cream, and other dairy products, mayonnaise and salad dressings, sauces, dips, and ketchup	Yes	Stabilizes fats and oils in food products that contain water to enhance smoothness; prevents separation of water and fat/oil; can change appearance of the food (e.g., milk looks whiter); can disrupt microorganisms in a liquid food	None
Milling, Grinding	Removing husk or outer surface of a	Grains (wheat, corn, rice,	Yes	Reduces the cooking time for whole grains; flour	None, all nutrients retained unless

	food material, usually grains, to enable further size reduction, including grinding into flour	oats, and barley) beans, sugar, and coffee		from grains can be used for various baked products such as breads, cakes, sauces, etc.	further processing is done
Peeling	Removing the surface/upper layer of a food product	Vegetables and fruits (e.g., carrots, potatoes)	Yes	Easy to use in food preparation or for processing; removes undesired attributes (e.g., soil) present on the surface of the food	Some nutrient loss is possible; changes color and/or flavor due to oxidation
Refining	Reducing the particle size of a mixture of pliable components (e.g., chocolate) to a consistent size	Chocolate and fudge	No	Enhances smoothness of chocolate products	None
Rolling/Sheeting	Flattening a mixture of pliable components to a specific thickness and to reduce the particle size	Grain based doughs used for pie crust, cookies, etc.	Yes	Shapes a dough to a consistent size to enable further processing (e.g., baking cookies)	None
Shredding	Cutting a food to create pieces of much	Cheese, vegetables (e.g., lettuce,	Yes	Easy to consume or use in preparing food (e.g.,	Minor nutrient loss possible; reduces shelf-life

	greater length than width or diameter	carrots), and fruits		shredded carrots or cheese on a salad)	due to exposure of large surface area to air and microorganisms
Slicing	Cutting a food to obtain a consistent dimension (e.g., width of potato chips) for consumption or for further processing	Vegetables, fruits, meat, cheese, and potatoes	Yes	Creates consistency for baking, cooking, or frying of foods; easy to consume (e.g., sliced carrots or apples)	Potential loss of nutrients; reduces shelf-life due to exposure of large surface area to air and microorganisms