

processing zones can be a source of cross contamination.

Fork lifts can be a continuing source of cross-contamination. Movement must be excluded from areas where product is exposed.

Movement of personnel between zones should be controlled and minimized. Sinks, boot washes, and clean outer garment exchange should be used at zone entrances, particularly if individuals are moving from a "dirty" zone to a "clean" area (e.g., movement from abattoir to fabrication room).

D. Packaging

A basis for selection of approved food packaging material should be effectiveness for protecting the product and preventing contamination. Packaging integrity must be maintained to avoid recontamination, i.e., proper seals, clips, covers, vacuum levels, etc. All packaging materials and supplies should be received and stored in manner that ensures their integrity.

E. Pest Control

An active program for control of insects, rodents, wild birds, and other pests should be maintained, including periodic examination of facilities for evidence of infestations.

F. Plant Environment Management

The processing environment should be maintained to meet GMP requirements. This includes daily operative checks to ensure compliance.

G. Water

Water for processing should be obtained from a potable source or where permitted, recycled according to approved guidelines. Periodic analysis of the water should be conducted to ensure that the source meets the recognized microbiological criteria for potable water.

General Guidelines for the Handling of Raw Beef Products in Retail Food Stores and Food Service Establishments

A. Food Receiving and Storage

Raw beef products should be received in good condition and at a temperature of 40°F or less. A visual inspection should be conducted to assure the condition of raw beef products.

B. Refrigerated Storage

Storage temperatures of less than 40°F will minimize microbial growth of *Salmonella*. Proper stock rotation should be practiced and:

A first-in, first-out stock rotation system should be utilized. All foods should be kept covered, wrapped, dated, labelled and rotated. Older products

should be used before newly received foods.

Raw products should be stored separately from cooked, ready-to-eat products to prevent cross-contamination.

The cooler should be regularly inspected for good sanitary conditions and maintained at the proper temperature (<40°F) and humidity. Products should be stored to assure sufficient air circulation.

C. Food Preparation

Delicatessen employees and food service workers should be aware of and practice good personal hygiene at all times, especially when preparing and handling foods.

Employees should not work when ill and should wash hands frequently, especially after handling raw foods and after using the restroom.

Clean clothing and appropriate hair cover should be worn by all personnel involved in food preparation.

Raw foods should be kept separate from cooked, ready-to-eat foods. Equipment and utensils used in the preparation of raw beef products should be properly cleaned and thoroughly sanitized before use with other foods.

Intact cuts of beef (roasts, chops, etc.) should be cooked to a minimum internal temperature of 140°F. The temperature should be checked with a good quality thermometer in the thickest part of the meat.

Hamburgers and other ground or restructured beef products should be cooked to a minimum internal temperature of 155°F. At this temperature, the meat is well done and has no pink color.

Beef products that are cooked and held for hot display should be kept at a temperature of at least 140°F.

Leftover meat products should be refrigerated immediately in shallow containers so quick cooling can be achieved and microbial growth can be prevented.

Reheat leftover meats and other precooked beef products to a minimum internal temperature of 165°F.

General Guidelines for the Handling of Raw Beef Products by Consumers

A. Food Purchasing

Buy perishable foods last, after all other grocery items have been selected. Insist that grocery baggers place all raw food of animal origin (red meat, poultry, seafood, eggs, etc.) in a separate plastic bag for transport. Never allow raw meat to contact a package of food that will not be cooked before consumption. Cold foods should be placed together in a

paper bag to help prevent excessive warming during transport.

Take purchases home immediately and place items to be kept refrigerated or frozen in proper storage as soon as possible.

B. Kitchen Appliances and Utensils

Use a thermometer to assure refrigerator temperature is 40°F or below and that freezer temperature is below 0°F.

Keep refrigerator and freezer shelves clean and sanitize periodically.

Separate raw from cooked foods in the refrigerator or freezer. Raw foods should never be stacked on top of cooked foods.

Use an oven thermometer to verify that the oven temperature is approximately the same as the temperature dial selector. Most oven owner's manuals will have instructions for adjusting the temperature selector for accuracy.

Counter tops, sinks, and cutting surfaces should be cleaned and sanitized after contacting any raw food. Clean surfaces with hot soapy water and rinse thoroughly. Sanitize the surface with a chlorine solution (one cap of bleach in one gallon of cold water; a new solution prepared weekly).

If washing utensils by hand, knives and cutting boards used with raw meats should be washed with hot, soapy water, followed by a hot water rinse and sanitation with a chlorine solution after each use. Washing in a dishwasher having a hot water rinse will sufficiently sanitize utensils (the temperature of the rinse should be at least 120°F).

C. Food Preparation

Cross-contamination occurs when utensils, plates, or hands used in preparing raw foods are not thoroughly washed and sanitized before using with cooked foods or foods that will not be cooked (e.g., salads). Never use the same plate to transport raw and cooked beef unless thoroughly washed and sanitized between uses.

Frozen products should be thawed in the refrigerator or under cold running water.

Cook intact beef cuts (roasts, chops, etc.) to a minimum internal temperature of 140°F. Always check temperatures with a meat thermometer at the thickest part of the meat.

Hamburgers and other ground or restructured beef products should be cooked until the meat is well-done (no pink color, juices run clear). The temperature at the coolest portion of the meat should reach 155°F.

Cold beef should be stored and served at 40°F or less.

Leftovers should be refrigerated immediately in shallow containers to