

Storing Designer and Convenience Foods

Sandra L. Andrews, Ph.D., R.D., Extension Specialist Department of Food Science and Human Nutrition Michigan State University

Donna O'Reilly, B.S., B.A., Neville Undergraduate Assistantship recipient Michigan State University

The world of convenience and "designer" foods has brought many easy and tasty changes to our lives. Now we can purchase meat and vegetable entrees that can be stored on the cupboard shelf instead of the freezer. If we do not have time to prepare a meal, many pre-prepared foods, such as pasta salad, seafoods, egg rolls and hot soups await us in the deli case. Today's foods are being produced with new ingredients such as intense sweeteners, fat replacers and fat substitutes. With the availability, of new foods, pre-prepared foods and designer foods comes the need to properly handle and store these foods to assure their maximum safety, quality and acceptability.

This bulletin has been designed to help you properly store convenience and designer foods to ensure the highest possible food quality flavor acceptability and freshness. You may use it in conjunction with MSU Extension bulletins CMI 87, CMI 88 and CMI 89 (all available from your county Extension office), which discuss food storage and handling of freezer, refrigerator and cupboard foods.

Follow these general tips to maintain food quality when storing foods:

Store foods at a proper temperature.

- Cupboard temperatures should be 50 to 70 degrees F.
- Refrigerator temperatures should be 34 to 40 degrees F.
- Freezer temperatures should be at or below 0 degree F.

Minimize food quality losses by reducing:

- exposure of foods to air;
- exposure of foods to light;
- exposure of foods to moisture;
- exposure of foods to heat.

Store fresh, unwrapped or leftover foods in moistureproof containers, or wrap or cover with moistureproof coverings such as:

- aluminum foil;
- plastic wrap or,
- freezer wrap.

Keep hands, utensils, and surfaces clean throughout the handling process.

Check foods for a proper seal before using them.

Check the product's packaging for an expiration date. If you are unable to decipher a date code, contact the manufacturer. Many food manufacturers include a consumer service telephone number on the label. If no telephone number is listed, call "Information" in the city where the manufacturer is located for a telephone listing: 1-(area code) 555-1212; or, contact your county Extension home economist, found in the "County" telephone listing.

Once you open vacuum packed aseptically packaged or other extended shelf-life foods, you must store and use them within a period of time that reflects the perishable nature of the product. For example, a shelf-stable fluid milk may be shelf stable for several months; however, once opened, it must be consumed within a similar period of time as fresh milk.

Recommendations for storing cupboard foods:

- Store foods in cool, dry cabinets.
- Avoid storing foods above ranges or refrigerators. These areas are very warm and can cause products to lose quality.
- Rotate food stock so that foods purchased first will be eaten first to provide maximum quality.
- Keep opened containers tightly sealed to limit exposure to air and humidity.
- Be aware that extended storage may cause flavors to fade and change and reduce nutrients.

Cupboard foods

Intense sweeteners

Equal and NutraSweet

- Store Equal table-top sweetener and NutraSweet-containing products in a cool, dry place. Excess heat and moisture may cause products to lump and lose sweetening ability. Unlike sugar and saccharin, Equal is not recommended for cooking or baking because it may become bitter. Foods containing NutraSweet have a shelf life similar to traditional products containing traditional sweeteners.
- Consume hot beverages containing NutraSweet within four hours, because some sweetness may be lost if held longer.
- Stir NutraSweet-containing beverage mixes with water until completely dissolved.
- Use unopened carbonated beverages containing NutraSweet within six months if stored at room temperatures to avoid loss of sweetness.

Sweet One and Sunette

- Store Sweet One table top artificial sweetener in a cool (40 degrees F), dry place. Do not refrigerate. Store at cool temperatures up to five years. Longer storage may lead to loss of sweetness. Sweet One is suitable for cooking and baking.
- Sweet One is a blend of Sunette (acesulfame-K), dextrose and other ingredients.

Fat substitutes

Simplese

- Simplese cannot be used for baking or frying. Because Simplese is made of protein, high temperatures will cause the product to coagulate (the way egg whites change from the fluid, raw state to coagulated solid when heated) and become unacceptable. However, Simplese products may be used on hot foods (ex., sour cream containing Simplese may be used on baked potatoes).
- Products containing Simplese brand fat substitute require the same storage procedures and have shelf lives similar to those of products that contain traditional fats (ex., shortening, which can be stored for up to eight months).
- As of January 1991, Simplese has been approved by the Food and Drug Administration only in frozen desserts and may not be available in all regions.

Baby foods

- Unopened baby foods in glass jars: Follow "use by" dates on the label.
- Unopened baby juice in plastic bottles: Store up to one year in a cool, dry place.

Beverages

- Powdered drink mixes: Store in cool, dry place up to 18 months to two years before opening.
- Juice/drink boxes: Follow the "best used by" dates on the label; storage possible up to nine months.

Commercially canned foods and entrees

- Canned foods: Store at 50 to 80 degrees F for up to two years. For maximum quality, use within 14 to 16 months.
- Vacuum-sealed microwaveable foods (ex., Top Shelf entrees-all types): Store at room temperatures for up to 18 months. Freezing is not recommended. However, if frozen, treat as a frozen product, keeping it frozen until use.

- Shelf-stable microwavable foods (ex., General Foods Minute Microwave or entrees-all types): Store in a cool, dry place for up to 18 months.
- Store entrees in the original container only. Do not store entree package in a closed container that stops air circulation around the package.
- Other microwavable foods (ex., Hamburger/Tuna Helper entrees): Store at room temperature for up to one year

Condiments

- For best results, store condiments in a cool, dry place.
- RealLemon lemon juice: Store unopened for up to 15 months. Keep in original green glass bottle to avoid damage from light. After opening, refrigerate for up to six months.
- Barbecue sauce: Store unopened for up to one year. After opening, refrigerate and use within one month.
- Pancake syrup: Use within three to four months of purchase. Refrigerate after opening.
- Horseradish sauce: Use the product before the "best when purchased by" date stamped on the label. Refrigerate after opening.
- Soy sauce: Store unopened for up to three years. Use within six to nine months after opening: refrigeration is not necessary.
- Sweet and sour sauce: Store unopened for up to three years. After opening, refrigerate and use, within six to nine months.
- Pickles: Store unopened for to 18 months. After opening, refrigerate and use within one month.
- Olives: Store unopened for up to two years. After opening, refrigerate and use within two weeks.
- Relish: Store unopened relish packaged in glass jars for up to two years. Store in unopened plastic bottle for up to 15 months. Refrigerate after opening and use within one month.
- Worcestershire sauce: Use unopened or opened within 30 months of purchase.
- Salsa: Store unopened for up to two years. After opening, refrigerate and use within two months.

Daily

- Grated cheese: Store in cool, dry place following recommended dating on package.
- Processed cheese products in aerosol cans: Store at room temperature following recommended dating on the package. Never refrigerate, because the spray mechanism will not work.

Dessert items and sweets

- Instant pudding/gelatin mixes (regular and sweetened with NutraSweet): Store in a cool, dry place for up to two years.
- Powdered whipped topping mix (ex., Dream Whip): Store in a cool, dry place up to 18 months.
- Chocolate bars, chocolate chips, sweet baking chocolate: Store at 65 to 70 degrees F. for up to one year.
- Chocolate candies: Store at 45 to 60 degrees F. at 50 percent humidity for up to one year.
- Hard candies: Store indefinitely at room temperature, away from moisture.
- Baking cocoa: Store indefinitely at room temperatures below 80 degrees F. and approximately 55 percent humidity.
- Corn syrup: Store unopened or tightly reclosed for up to three years.

Side dishes and soup mixes

- Instant mashed potatoes: Store at room temperature and normal humidity for up to one year.
- Instant rice (quick cook white, boil-in-bag, instant brown, microwave, side dish mixes, premium white): Store in original container in a cool, dry place up to 18 months. Once prepared, store microwave rice tightly covered in the refrigerator with aluminum foil, plastic wrap or in a sandwich bag for three to four days. Reheat by adding water and following the "reheat" directions on the package. Do not freeze. All other types of instant rice can be stored covered in the refrigerator up to three days. If used in a casserole, the product may be frozen.
- Dry soup mixes: Store in a cool, dry place six to nine months.

Snacks

- Microwave popcorn: Store in a cool, dry place for up to 18 months (if a freezer product, keep frozen).
- Fruit roll-ups: Store at room temperature for up to one year.
- Canned yogurt (ex., Del Monte yogurt cup): Store unopened at room temperature for up to 18 months.

Recommendations for storing refrigerator foods:

- Keep refrigerator temperatures between 34 to 40 degrees F.;
- Keep foods covered or wrapped;
- Use foods quickly ("first-in, first-out"); extended storage may result in quality deterioration.

Refrigerator foods

Beverages

- Full-strength (pre-mixed) fruit juices in carton (ex., Tropicana various flavors): Keep refrigerated. Do not use after the "used-by" date stamped on the carton.

Canned hams

- Canned hams that require refrigeration are best if used within 14 to 16 months. Once opened, keep refrigerated and use within three to five days.

Condiments

- Premium RealLenion lemon juice: Refrigerate at all times. Store for up to one year.
- Bean sprouts: Keep refrigerated in a plastic bag three to five days.

Dairy

- Fresh cheese (cream, cottage, Neufchatel): Keep refrigerated. Use within two weeks.
- Processed cheeses: Keep refrigerated. Best if used within three to four weeks.
- Yogurt: Keep refrigerated. Follow the "use by" date on the package, or up to two weeks after the

"sell by" date.

- Shredded cheeses: Keep refrigerated. Use within two days of the "best when purchased by" date on the label.
- Soft cream cheese: Keep refrigerated. Use within five to six days after opening and within one week of the "best when purchased by" date.

Fats and oils

- Margarine: Keep refrigerated. Use within one week of the "best when purchased by" date on the package.
- Vegetable oil spread: Keep refrigerated. Use within one week of the "best when purchased by" date on the package.

Recommendations for storing freezer foods:

- Keep temperatures in the freezer at or below 0 degrees F.;
- Keep foods wrapped in moisture vapor-proof materials to avoid moisture loss;
- Thaw in the refrigerator or in the microwave on the "defrost" setting.

Freezer foods

Beverages

- Canned juice concentrate: Keep frozen for eight months to one year. Once diluted, keep in the refrigerator five to six days.
- Canned cranberry juice cocktail: Keep frozen for three to six months. Once diluted, keep in the refrigerator five to six days.

Dairy

- Natural cheese: Can be frozen for up to six months. Thaw in refrigerator.
- Processed cheese: Can be frozen for up to four months. Thaw in refrigerator.

Dessert items and sweets

- Whipped topping (ex., Cool Whip): Store frozen for up to 14 months. May be thawed and stored two to three weeks in the refrigerator. May be refrozen four to five times if thawed in the refrigerator.
- Frozen pie crust shells (ex., Pet Ritz): Keep frozen for up to one year. If all pie crust shells in the opened package are not used, rewrap and freeze remaining crust(s) and use within two months.
- Fruit-flavored frozen pops: May be kept frozen indefinitely.
- Frozen cream pies: Keep frozen for up to six months.

Entrees

- Frozen dinners (ex., LeMenu, Banquet, Health\Choice, Lean Cuisine): Keep frozen for up to one year.

Fruit

Frozen fruit: Keep frozen for up to two years. If thawed, do not refreeze.

Snacks

- Freezer microwave popcorn: Store in freezer for up to one year.

Poultry and fish

- Frozen chicken (ex., Banquet): Store frozen for up to six months. Once cooked, it may be refrigerated for two to three days.,
- Frozen ground turkey: Keep frozen for up to six months.
- Frozen turkey breakfast sausage: Keep frozen for up to six months.
- Battered/breaded frozen fish: Keep frozen for up to one year. Use promptly if thawed.

Vegetables

- Frozen potato products (ex., tater tots, french fries, microwave fries): Keep frozen for up to one year.
- Frozen vegetables (in box or bag, with or without sauce): Keep frozen three to six months. Once prepared, store covered in refrigerator for up to two days.
- Microwave-ready, single serving frozen vegetables (with or without sauce): keep frozen for up to one year.

Recommendations for storing deli foods:

(typical pre-cooked foods available at grocery stores):

- Use foods quickly.
- Wrap and freeze deli meats if not eaten within two to four days.
- Keep hot foods (to be eaten immediately) hot. If reheating is necessary, reheat to internal temperatures of 165 degrees F. Consult with the deli manager for storage suggestions at time of purchase. if necessary.
- For ready-to-heat frozen and refrigerator foods, follow the specific directions for defrosting and cooking on the label. Always cook these foods at oven temperatures higher than 325 degrees F. When heating with either a conventional or microwave oven, heat foods to an internal temperature of 165 degrees F, or higher before serving.

- Use heated deli foods as quickly as possible after purchase. Keep foods hot until use. Reheat to internal temperatures of at least 165 degrees F. if cooling takes place. Do not eat heated deli foods if their internal temperature has lowered to less than 140 degrees for two hours or longer.

Deli foods

Dairy

- Hard cheeses: Store in the refrigerator for three to four weeks.
- Soft cheeses: Store in the refrigerator for up to two weeks.

Meats

- Bologna, salami: Store in the refrigerator for up to three to five days.
- Turkey, cooked chicken, rare roast beef: Store in the refrigerator for up to two to four days.
- Well-cooked roast beef: Store in the refrigerator for up to four days.
- Hard salami, dry sausages: Keep four to six weeks from date of purchase at room temperature if no other directions are printed on the label. If refrigeration is required, keep refrigerated up to six months before opening. Once opened, store in refrigerator and use within two to three weeks.
- Beef jerky: Keep at room temperature for six months to one year. If the product molds, throw it away.
- Wrap and freeze deli meats that will not be eaten, within two to five days. Thaw in refrigerator.

Salads

- Potato salad. macaroni salad. coleslaw: Store in refrigerator and use within three days.

For more information on storing and handling cupboard, refrigerator and freezer foods, consult the following publications, available from your county Cooperative Extension Service office. Single copies of each are free to Michigan residents:

CMI 87, "Spotlight on Freezer Storage."

CMI 88, "Spotlight on Refrigerator Storage."

CMI 89, "Spotlight on Cupboard Storage."

MSU is an Affirmative-Action Equal-Opportunity Institution. Cooperative Extension Service programs and materials are open to all without regard to race, color, national origin, sex or handicap, age or religion.

Issued in furtherance of Cooperative Extension work in agriculture and home economics, acts of May 8, and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Gail Imig, director, Cooperative Extension Service. Michigan State University, E. Lansing, MI 48824.

This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by the Cooperative Extension Service or bias against those not mentioned. This bulletin becomes public property upon publication and may be reprinted verbatim as a separate or within another publication with credit to MSU. Reprinting cannot be used to endorse or advertise a commercial product or company.

New 11:91 5M-KDP-MP, Price 50 cents.

Extension Bulletin E-2297 Cooperative Extension Service
Michigan State University
November 1991