

## Quality Changes During Storage of Many Foods

Each and every time we look at food, we evaluate the quality of the product. American consumers have high expectations about the quality as well as the safety of our food supply. Most of the food we purchase is of high quality and safe to consume. However, with storage, there can be noticeable changes in appearance, odor, flavor and texture of food products. QUESTION: I bought dried apricots at the store. When I opened the package, some of the fruit was brown. Is it safe to eat? ANSWER: Some fruits, such as apples, bananas, peaches and apricots, will turn brown when they are cut and exposed to oxygen in the air. When you cut these fruits, the cells are exposed to oxygen. You see the same browning reaction when you bruise an uncut apple or a banana. When a whole apple or banana is dropped or pressed firmly, the cells are broken internally and exposed to oxygen inside the fruit. Cut or bruised fruit, when exposed to oxygen, will turn brown. While the fruit may look unappetizing, it is safe to eat. In cut fruit, the browning reaction can be slowed by placing slices in an acid-like lemon, orange or pineapple juice. Coating the cut surface with a sugar solution, salad dressing or sauces that prevent the fruit from coming in contact with air also will slow the browning. In commercially cut and dried fruits, such as apricots, pears, apples or bananas, sulfites are used to prevent these changes. Browning fruits do not cause food-borne illness. They are safe to eat. QUESTION: I use nonfat dried milk in baking and cooking at home. When I opened the box last week, the dry milk looked brownish and tan. Is it safe to use? ANSWER: Yes. It is safe to use. However, you may notice that it is difficult to rehydrate and it may smell and taste differently. During long-term storage, a chemical reaction between the protein and sugar naturally found in dry milk can occur. The reaction causes the dry milk to look tan or brown and have off-flavors and off-colors. While the product is safe to use, you probably won't be satisfied with the quality of the food you cook or bake. Buy a new box, store for a shorter time and in a cooler place. Of&nbsp; Special Interest: The same browning reaction between protein and sugar is very desirable in some food products. When coffee beans are dark roasted, meats are cooked and cookies and homemade bread are baked to that golden brown color, it's the same chemical reaction. QUESTION: At breakfast, my husband commented that the butter he put on this toast didn't taste right. What causes this? ANSWER: There are two possible causes of the off-flavor in the butter. When the fat in butter is exposed to oxygen in the air, rancidity may occur over time. Rancidity is a complex chemical reaction. In products that contain fat, such as potato chips, crackers, snack foods and butter or margarine, the reaction is one of the major quality spoilers. Do you keep you butter in the refrigerator? The reaction causing rancidity is slowed by cool storage temperatures. The other possibility is that the butter simply absorbed odors from the air in the refrigerator.

## About the Author

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