

You deserve a break today, so get up... What chemical turns your hot dog red?

By NICK GALLO
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All components of food are chemicals. But food is no longer simply carbohydrates, fats, proteins, minerals and water. Now, there are anti oxidants, anti mycotics, buffers, thickeners, emulsifiers, chelating agents, colors and flavors. Call them "additives."

Some are safe, some are questionable, others have been outright banned by the Food and Drug Administration. Here is a list and some common terms found on labels of everyday foods.

Acetic Acid—this substance gives vinegar its sharp taste and odor. It preserves, flavors or acidifies foods.

Acetone Peroxide—This chemical bleaches and ages flour. Since freshly milled flour lacks the strength and resilience needed to produce fluffy, tender bread, bakers use chemicals to quicken the aging process.

Coal Tar Dyes—This synthesis of colored compounds from coal is converted and used in such industries as beverages, breakfast cereals, frozen desserts and meats.

Benzoyl Peroxide — This powder bleaches flour within 24 hours of mixing.

Brominated Vegetable Oil — The density of this oil has been increased to that of water by being combined with bromine. It is combined with flavors and added to carbonated and noncarbonated fruit-flavored drinks.

Butylated Hydroxyanisole (BHA) and Butylated Hydroxytoluene (BHT) — Both chemicals are used in processed foods that contain fat or oil to prevent polyunsaturated oils from oxidizing and becoming rancid. The food industry maintains both chemicals also add to the shelf life of various products.

Carrageenan—Manufacturers use carrageenan to add "body" to soft drinks, to thicken ice cream, jelly, sour cream and syrup, to stabilize the foam in beer, and to prevent the oil from separating out of frozen whipped topping.

Corn Syrup—This solution of cornstarch mixed with acids or enzymes not only sweetens and thickens foods and beverages but acts to retard crystallization of sugar and prevents loss of moisture in baked goods.

EDTA—Since factory-processed food

unavoidably contacts impurities from metal rollers, scrapers, blenders and containers, this chemical traps metal ions to prevent oxidation.

Hydroxylated Lecithin—Manufactured by treating soybean lecithin with peroxide, the food industry uses it as an emulsifier and antioxidant in baked goods, ice cream and margarine.

Imitation Beef and Chicken Flavors — These contain sugars, vegetable fat, hydrolyzed vegetable protein, monosodium glutamate, amino acids, disodium inosinate and modified starch.

Invert Sugar—This 50-50 mix of glucose and fructose is used in candy because it is sweeter, more soluble and easier to crystallize than ordinary table sugar.

Meat Tenderizer — Some meatpackers inject proteases (extracts from plants or micro-organisms) into a steer's bloodstream shortly before the animal is slaughtered to loosen muscle fibers that contract in rigor mortis.

Sodium Benzoate — Under acidic conditions found in fruit juices, carbonated drinks and salad dressing, this substance pre-

vents the growth of micro-organisms (bacteria, fungi and yeast).

Sodium Erythorbate—A non-nutritive relative of vitamin C, this chemical brightens the pink color of frankfurters, bologna and other cured meats.

Sodium Nitrate and Sodium Nitrite — Used to preserve ham, bacon, frankfurters, luncheon meats and smoked fish, both additives also produce the characteristic pink color of cured foods and retard the growth of bacteria which cause botulism food poisoning.

Vegetable Oils — Since the human body cannot synthesize several fatty acids, it needs foods which contain them. Linoleic acid, the most important of these acids, is highly concentrated in safflower and corn oils. Some acids are saturated, some unsaturated, and others polyunsaturated. Large amounts of saturated fats generally produce high cholesterol levels which have been linked to hardening of the arteries.

The above information is derived from Michael F. Jacobson's "Eater's Digest, The Consumer's Factbook of Food Additives," Anchor Books, 1976.

White sugar may be sweet, but its food value is low

By MARTHA BLISS
Of the Emerald

Sugar? It's that stuff that looks like salt and sometimes comes in cubes.

The whole notion of white granulated sugar is so ingrained in modern America that the other sugar forms often get shelved in the back cupboards of the mind as useless. Only in specialty cookbooks do the recipes call for alternative sugar forms.

And rarely can today's shopper buy honey, brown sugar or raw sugar with as much ease as the white granulated variety.

White granulated is king of sugars today. Hostess Twinkies, Baskin and Robbins ice cream, EMU chocolate cookies. You name it, they're all stuffed with white sugar. Even the "more nutritious" sweets from home kitchens tend to have more white sugar in them than any other type of sugar.

Despite its popularity, however, white granulated sugar ranks far below brown sugar, honey and molasses on the nutrition scale.

And on top of its nutritive deficiencies, white granulated sugar carries a myth of quick energy. Athletes often down a quick candy bar before a race, thinking its white sugar content will instantly give them a fast start and long endurance.

But the smarter athletes, instead, down a few tablespoonsful of honey several hours before the race. Whereas refined sugar is chemically complex and must first be broken down before it can go into the blood stream and thereby give the body an energy lift, honey already is in the simple sugar form which can dissolve into the blood stream almost immediately.

Most people realize the inefficiencies of white granulated sugar, but don't know what to do about it. Actually, however, substituting in alternative sugar types when cooking is easy, once you get the hang of it.

Brown sugar, a less refined product of beet or cane sugar, compares equally cup for cup in cooking with white granulated.

Honey is pretty much the same, too, although the recipe's liquid volume should be decreased by a quarter cup for every cup of honey substituted. Canning with honey, however, requires a slightly different approach. You can substitute honey for white granulated sugar in most canning recipes, but use only half the sugar amount called for. Use only mild honeys for canning so as not to overpower the flavor of the fruit being canned.

Molasses comes in three forms. Unsulphured molasses is manufactured from the juice of sunripened cane and is most common on grocery shelves. Sulphured molasses is a by-product of refined sugar making and blackstrap molasses is a waste product of that same process.

The Joy of Cooking cookbook recommends using no more molasses than half the amount of sugar called for in a recipe. Add a half teaspoon soda for each cup of molasses used and omit the baking powder. And make sure to reduce the other liquids in the recipe by a quarter cup for each cup of molasses added.

Obviously, the alternative sugar forms will change the texture and taste of your concoction, so be prepared to experiment to find what suits you.

But whatever you do, go easy on the sugar consumption. Estimates in 1969 had each American annually eating 19.8 pounds of candy, 450 eight-ounce cans of carbonated beverages, 135 sticks of chewing gum and another 75 pounds of general sugar consumption.

For more information on honey and beekeeping, a display by Honey Heaven and beekeeper John Karlick is set up in the EMU today as part of the University's recognition of Food Day.

Food Day chews over the world's food problems

You can't get much more basic than food. It's about the only thing that traverses enemy lines and racial borders without a flinch. Measly as it sometimes comes, food is king of life.

America salutes food today. Hundreds of cities and towns in all 50 states have organized Food Day observances, and Eugene is no exception. The 1977 celebration focuses on personal nutrition and international responsibility.

The Center for Science in the Public Interest has a hotline set up today in Washington, D.C., where a staff of experts in domestic and global hunger, agriculture, food additives, personal nutrition and food politics and economics are on line to answer questions. The toll free number (800-424-4981) will be in operation from 9 a.m. to 7 p.m. EST.

Here's a rundown of local Food Day events:

University: Displays on world hunger, solar food drying, tofu, beekeeping and honey and homecanning, along with sale booths with organic seeds and natural baked goods, will be set up on the EMU terrace from 10 a.m. to 3 p.m.

"The Soil Frontier," a film, will be shown at 12:30 p.m. in Room 150, Geology.

Downtown: Local slides and filmstrips on world hunger will be shown continuously from noon to 5:30 p.m. in the Atrium courtyard. Sponsored by Hunger Information Center-Clergy and Laity Concerned. Included are the films "Guess Who's Coming to Breakfast," on Gulf and Western Corporation control in the Dominican Republic and "Hunger in the Global Community," with Sen. Mark Hatfield.

Area Schools: Cooks will prepare a "basic meal" typical of the daily food of most people in the world. Classes will prepare international recipes and gather for a tasting fair to share food in a simulation of the unequal distribution of the world's food supply. Both events are day-long at Lincoln Community School.

Sugars, Honey and Molasses Compared					
Composition (per 100 g. or 3½ oz.)					
	White Sugar (Granulated)	Brown Sugar (Beet or Cane)	Molasses (Third Extraction or Blackstrap)	Honey (Strained or Extracted)	Maple Sugar
1. Minerals	mg	mg	mg	mg	mg
Calcium	0	85	684	5	143
Phosphorus	0	19	84	6	11
Iron	0.1	3.4	16.1	0.5	1.4
Potassium	3.0	344	2927	51	242
Sodium	1.0	30	96	5	14
2. Vitamins					
Thiamin	0	0.01	0.11	trace	—
Riboflavin	0	0.03	0.19	0.04	—
Niacin	0	0.2	2.0	0.3	—



Honey is just one of several alternatives to white sugar.