

Department of Legislative Services  
Maryland General Assembly  
2015 Session

FISCAL AND POLICY NOTE

House Bill 679 (Delegate Moon, *et al.*)  
Ways and Means

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Primary and Secondary Education - Health and Safety - Chemical-Free Schools  
Act

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This bill prohibits public schools and local school systems from purchasing, selling, or serving food in a public school during regular school hours if the food contains any of the specified ingredients or chemicals including artificial colors and artificial sweeteners. The bill applies to vending machines and a food service provider that regularly sells or serves food items on a school campus.

The bill takes effect July 1, 2015.

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Fiscal Summary

**State Effect:** None. The bill does not affect State funding for public schools.

**Local Effect:** Local school system expenditures for school meal programs increase beginning in FY 2016. Potential decrease in school system revenues from school-based vending machines beginning in FY 2016. **This bill may impose a mandate on a unit of local government.**

**Small Business Effect:** None.

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Analysis

**Bill Summary:** Specifically the bill prohibits foods containing any of the following ingredients or chemicals:

- artificial colors and flavorings;

- artificial sweeteners, including acesulfame potassium, aspartame, saccharin, and sucralose;
- bread or flour additives, including azodicarbonamide and potassium bromate;
- brominated vegetable oil (BVO);
- monosodium glutamate (MSG) and other additives containing glutamate, including autolyzed yeast, torula yeast, and hydrolyzed vegetable protein;
- mycoprotein (Quorn);
- preservatives, including butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), propyl gallate and tertiary butylhydroquinone (TBHQ);
- sodium nitrate;
- sodium nitrite;
- sulfur dioxide; and
- sodium sulfite.

**Current Law:** The U.S. Food and Drug Administration (FDA) is primarily responsible for regulating food additives in the United States. With the assistance of the local health department, each local board of education must provide a healthful school environment.

Local school systems are subject to federal law and regulations through participation in federal food and nutrition programs, including (among others) the National School Lunch Program (NSLP), the School Breakfast Program (SBP), and other programs for free and reduced-price meals and free milk in schools. The federal Healthy, Hunger-Free Kids Act of 2010 requires schools to offer nutritious, well-balanced, and age-appropriate meals to all the children they serve to improve their diets and safeguard their health. Children age five and older must be offered lunches that meet the following nutrition standards for their age/grade group: specified food components and food quantities; zero grams of trans fat per serving or a minimal amount of naturally occurring trans fat; less than 10% of total calories from saturated fat; reduced amount of sodium; and following the applicable recommendations from the 2010 Dietary Guidelines for Americans.

The Maryland State Department of Education (MSDE) monitors local school compliance with federal law regarding school food and nutrition programs. The Maryland Code of Regulations indicates that local school systems are subject to administrative review by MSDE and/or the U.S. Department of Agriculture (USDA) for the purpose of evaluating the administration of a food and nutrition program.

USDA prohibits schools from selling foods of minimal nutritional value (FMNV) during meal periods anywhere reimbursable meals are sold or eaten. Chapter 312 of 2005, the Student Health Promotion Act of 2005, requires Maryland public school vending machines that sell FMNV to have and use timing devices that automatically prohibit or allow access to vending machines in accordance with policies established by local boards of education.

According to the Maryland Nutrition Standards for All Foods Sold in Schools adopted by the State Board of Education on June 27, 2014, and effective July 1, 2014, all foods and beverages sold to students on the public school campus, including cafeteria a la carte items, vending machines, school stores, and fundraising activities, from 12:01 a.m. until 30 minutes after the end of the official school day must meet the nutrition standards described below.

All foods (other than foods offered in the NSLP and SBP) must fall into one of the following categories:

- be whole grain-rich (*i.e.*, at least 50% whole grain by weight or listed as first ingredient);
- first ingredient must be a fruit, vegetable, dairy product or protein food;
- be a combination of food that consists of at least ¼ cup of fruit and/or vegetable; or
- contain at least 10% of the Daily Value of a nutrient of public health concern – *i.e.*, calcium, potassium, vitamin D, or dietary fiber (this criterion will expire on July 1, 2016).

Foods must also meet all of the standards shown in **Exhibit 1**.

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**Exhibit 1**  
**Maryland Nutrition Standards for All Foods Sold in School**

Calories		Sodium		Fats			Sugar
Snack/Side Dish	Entrees	Snack/ Side Dish	Entrees	Total Fat	Saturated Fat	Trans Fat	Weight Sugar/ Total Weight
≤ 200 calories	≤ 350 calories	230 mg (After 7/1/2016 ≤ 200 mg)	480 mg	35% of calories	<10% of calories	Zero grams	35% of total weight from sugar

Source: Maryland State Department of Education

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Beverages must also meet the standards shown in **Exhibit 2**.

**Exhibit 2**  
**Beverage Standards for Maryland Schools**

	<b>Elementary</b>	<b>Middle</b>	<b>High School</b>
Plain Water or Plain Carbonated Water	Any Size	Any Size	Any Size
Low-fat Milk, unflavored Nonfat Milk, flavored or unflavored	≤ 8 fl oz	≤ 12 fl oz	≤ 12 fl oz
100% Fruit/Vegetable Juice	≤ 8 fl oz	≤ 12 fl oz	≤ 12 fl oz
100% Fruit/Vegetable Juice -diluted with water, with or without carbonation -with no added sweeteners	≤ 8 fl oz	≤ 12 fl oz	≤ 12 fl oz
Other flavored and/or carbonated beverages -soda is not allowed	Not allowed	Not allowed	If ≤ 12 fl oz must meet: ≤40 calories/8 oz ≤60 calories/ 12 oz
			If ≤ 20 fl oz must meet: ≤5 calories/8 oz ≤10 calories/ 12 oz
Caffeine, beyond naturally occurring trace amounts	Not allowed	Not allowed	Not allowed

Source: Maryland Department of Education

Under the federal Child Nutrition and Women, Infants and Children Reauthorization Act, since 2004 all local school systems participating in the NSLP or other federal nutrition programs were required to create local school system wellness policies. The federal Healthy, Hunger-Free Kids Act of 2010, added new provisions for local school wellness policies related to implementation, evaluation, and publicly reporting on progress of local school wellness policies.

**Background:** FDA regulates food additives in the United States. Food additives are subject to approval by the agency and may only be used in compliance with the approved uses, specifications, and restrictions. In the approval process, FDA evaluates safety data to ensure that a food additive is safe for its intended purposes. Since absolute safety of any substance can never be proven, decisions about the safety of food additives or other food ingredients are made on the best scientific evidence available.

According to the FDA, food additives are used to (1) maintain or improve safety and freshness; (2) improve or maintain nutritional value; and (3) improve taste, texture, and

appearance. Examples of some of the food additives including those mentioned in the bill and their uses are shown in **Appendix 1**.

As with many foods, some people may have sensitivities to some food additives. The FDA requires some food additives to be used in limited quantities due to health concerns. Some of the food additives specified in the bill have been banned in other countries due to specific health concerns, although all are approved for human consumption in the United States by the FDA.

Mycoprotein is a protein from fungi; the main mycoprotein available in Europe and North America is called Quorn. It was originally developed as a food source to combat food shortages. It is used in a wide range of ready meals, grills, sausages, burgers and deli slices, as well as cooking ingredients.

Mycoprotein is made in fermenters similar to those found in a brewery. It is made by adding oxygen, nitrogen, glucose, and minerals to a fungus called *Fusarium venenatum*. These ingredients combine in the fermenter to form a continuous supply of mycoprotein which is harvested and dried before egg albumen is added to help with binding.

School-based child nutrition programs are federal entitlement programs, operating in public and nonprofit private schools and residential child care institutions. Local school systems and child care centers are reimbursed for each meal served; however, the amount of reimbursement is less than the actual cost of producing a school meal. USDA sets nutritional standards and meal pattern requirements for schools that receive reimbursement.

Children from families with incomes at or below 130% of the poverty level are eligible for free meals. Those with incomes between 130% and 185% of the poverty level are eligible for reduced-price meals, for which students can be charged no more than 40 cents. Children from families with incomes over 185% of poverty pay full price, though their meals are still subsidized to some extent. Local school food authorities set their own prices for full-price meals, but must operate their meal services as nonprofit programs.

**Local Revenues:** Many local school systems allow school administrators to raise revenues by contracting with vending machine companies. The bill restricts this practice to vending machine companies that only sell products that do not include any of the food additives listed in the bill. The food additives listed in the bill are widely used in food products in the United States; thus, it is unknown if there are prepackaged products that comply with the requirements or if these products would be profitable to sell in school vending machines.

**Local Expenditures:** Most local school systems are reimbursed \$2.98 per free lunch served for the 2014-2015 school year; however, an USDA report from 2008 found that the cost to produce a school lunch regularly exceeded the free lunch subsidy. School systems partially offset the cost to produce school lunches through full-price meals, State funds, and commodity foods obtained through the USDA. Thus, if expenditures per meal increase, local school systems will either have to raise prices on full price meals to cover expenditures for all meals or increase local spending on school nutrition programs.

The food additives listed in the bill are widely used in food products in the United States; therefore, prohibiting these ingredients or chemicals in school meals may limit the availability of food distributors and significantly increase costs for school meal programs. Local school systems generally operate their school nutrition programs at a loss, so any increase in food prices will increase school expenditures and may increase student meal prices significantly. Some commodity foods may contain the food additives listed in the bill.

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### **Additional Information**

**Prior Introductions:** None.

**Cross File:** None.

**Information Source(s):** U.S. Food and Drug Administration, Quoran, Mycoprotein.org, U.S. Department of Agriculture, Maryland State Department of Education, Department of Legislative Services

**Fiscal Note History:** First Reader - March 12, 2015  
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## Appendix 1 Types of Food Additives

<b><u>Types of Ingredients</u></b>	<b><u>What They Do</u></b>	<b><u>Examples of Use</u></b>	<b><u>Examples of Name Found on Product Label</u></b>
Artificial Colors	Offset color loss, enhance colors, provide color to colorless and “fun” foods	Many processed foods	FD&C Blue Nos. 1 and 2 Note: Exempt color additives are not required to be declared by name on labels but may be declared simply as colorings or color added
Artificial Flavorings	Add specific flavors	Pudding and pie fillings, gelatin dessert mixers, cake mixes, salad dressings, candies, soft drinks, ice cream, BBQ sauce	Artificial flavor
Artificial Sweeteners	Add sweetness without extra calories	Beverages, baked goods, confections, table-top sugar substitutes, many processed foods	Acesulfame potassium, aspartame, saccharin, and sucralose
Dough Strengtheners and Conditioners	Produce more stable dough	Breads and other baked goods	Azodicarbonamide, potassium bromate
Flavor Enhancers	Enhance flavors already present in foods	Many processed foods	MSG
Preservatives	Prevent food spoilage; slow or prevent changes in color, flavor, or texture; maintain freshness	Fruit sauces and jellies, beverages, baked goods, cured meats, oils and margarines, cereals, dressings, snack foods, fruits and vegetables, cured meat, dried fruit, dried meat, cut potatoes	BHA, BHT, propyl gallate, THBQ, sodium nitrate, sodium nitrite, sulfur dioxide, sodium sulfite
Emulsifiers	Allow smooth mixing of ingredients, prevent separation, keep emulsified product stable, reduce stickiness, control crystallization, keep ingredients dispersed, and help products dissolve more easily	Salad dressings, peanut butter, chocolate, margarine, frozen desserts, soda	BVO, soy lecithin, egg yolks, polysorbates, sorbitan monstearate

Source: U.S. Food and Drug Administration; Department of Legislative Services