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Health Canada's Proposal to Enable the Use of *Spirulina* Extract as a Colouring Agent in Various Foods

Notice of Proposal – Lists of Permitted Food Additives

Reference Number: NOM/ADM-0034

January 9, 2020



Summary

Food additives are regulated in Canada under [Marketing Authorizations](#) (MAs) issued by the Minister of Health and the *Food and Drug Regulations* (Regulations). Approved food additives and their permitted conditions of use are set out in the [Lists of Permitted Food Additives](#) that are incorporated by reference in the MAs and published on the Canada.ca website. A petitioner can request that Health Canada approve a new additive or a new condition of use for an already approved food additive by filing a food additive submission with the Department's Food Directorate. Health Canada uses this premarket approval process to determine whether the scientific data support the safety of food additives when used under specified conditions in foods sold in Canada.

The food industry has for some time expressed interest in the use of *Spirulina* products to impart colour to foods. Health Canada's Food Directorate received a food additive submission seeking approval for the use of *Spirulina* extract as a colouring agent in unstandardized confectionery at a maximum level of use of 2%.

Information related to the safety of this food additive supports its use in unstandardized confectionery as requested by the petitioner as well as a variety of other foods. Consequently, Health Canada proposes to enable the use of this new colouring agent in unstandardized confectionery and the following unstandardized foods: frostings; frozen desserts; gelatin desserts; icings; non-alcoholic beverages; non-alcoholic beverage concentrates; and yogurt, as well as the following standardized foods: ice cream mix (standard prescribed by section [B.08.061](#) of the Regulations); (naming the fruit) jelly with pectin (standard prescribed by section [B.11.241](#)); and icing sugar (standard prescribed by section [B.18.006](#)).

Health Canada proposes to enable the use of *Spirulina* extract in these foods, at a level consistent with Good Manufacturing Practice, by adding the entries shown in the table below to the [List of Permitted Colouring Agents](#).

Proposed Modification to the *List of Permitted Colouring Agents*

Item No.	Column 1 Additive	Column 2 Permitted in or Upon	Column 3 Maximum Level of Use and Other Conditions
15.	<i>Spirulina</i> extract	(1) Frostings; Icings; Icing sugar	(1) Good Manufacturing Practice
		(2) Gelatin desserts; Unstandardized frozen desserts	(2) Good Manufacturing Practice
		(3) Ice cream mix	(3) Good Manufacturing Practice
		(4) (Naming the fruit) Jelly with pectin	(4) Good Manufacturing Practice
		(5)	(5)

Item No.	Column 1 Additive	Column 2 Permitted in or Upon	Column 3 Maximum Level of Use and Other Conditions
		Unstandardized confectionery (except unstandardized chocolate confectionery)	Good Manufacturing Practice
		(6) Unstandardized non-alcoholic beverages; Unstandardized non-alcoholic beverage concentrates	(6) Good Manufacturing Practice
		(7) Yogurt	(7) Good Manufacturing Practice

Rationale

Health Canada’s Food Directorate completed a premarket safety assessment for the use of *Spirulina* extract as a food colouring agent. The assessment concluded that information related to allergenicity, chemistry, microbiology, nutrition, and toxicology supports the safety of *Spirulina* extract for its proposed use.

Spirulina extract is a water extract of the edible cyanobacterium *Arthrospira platensis* (commonly called *Spirulina platensis*). There is a long history of humans consuming this microorganism without any observed toxicological effects, and reports of allergic reactions related to *Spirulina* are extremely rare. *Spirulina* extract is non-toxic in animal tests and its use as a food colouring agent as proposed does not pose any microbiological or nutritional safety concerns.

The results of the premarket assessment support the safety of *Spirulina* extract for use as a colouring agent as set out in the table above. Health Canada is therefore proposing to enable the use of this food additive as shown in the table.

Other Relevant Information

The *Food and Drug Regulations* require that food additives such as *Spirulina* extract that do not have food-grade specifications set out in Part B of the Regulations meet the most recent food-grade specifications set out in the *Food Chemicals Codex* or the *Combined Compendium of Food Additive Specifications*. The *Food Chemicals Codex* is a compendium of standards for purity and identity for food ingredients, including food additives, published by the United States Pharmacopeial Convention. The *Combined Compendium of Food Additive Specifications*, which contains specifications prepared by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), is published by the Food and Agriculture Organization of the United Nations.

Implementation and Enforcement

The proposed changes will be effective the day on which they are published in the [List of Permitted Colouring Agents](#). This will be announced via a Notice of Modification that will be published on the [Government of Canada's website](#).

The Canadian Food Inspection Agency is responsible for the enforcement of the *Food and Drugs Act* and its associated regulations with respect to foods.

Contact Information

For additional information or to submit comments related to this proposal, please contact:

[Bureau of Chemical Safety, Food Directorate](#)

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If communicating by e-mail, please use the words "***Spirulina* extract (NOP-0034)**" in the subject line of your e-mail. Health Canada is able to consider information received by **March 23, 2020**, 75 days from the date of this posting.