

## PROPOSED RULES

DEPARTMENT OF HEALTH,  
EDUCATION, AND WELFARE

Food and Drug Administration

[21 CFR Parts 3, 121]

SUBSTANCES PROHIBITED FROM USE IN  
FOOD

## Notice of Proposed Rulemaking

The Food and Drug Administration has prohibited the use of various substances in food on the basis of toxicological data showing a potential hazard to public health or because inadequate data exist to conclude that they are safe for use in food. Some of these actions were taken prior to enactment of the Food Additives Amendment of 1958, and others have been taken pursuant to that Amendment.

Because information on these actions is presently scattered throughout existing regulations, FEDERAL REGISTER notices not codified in the Code of Federal Regulations, old trade correspondence (TC), and unpublished correspondence, and thus are either difficult to find or are not generally available to the public, the Commissioner of Food and Drugs has concluded that they should be consolidated in one regulation. All of the substances presently proposed for inclusion in this regulation were the subject of action previously taken. The Commissioner is not now proposing such action against any additional substances. Should the current review of the safety of direct human food ingredients classified as generally recognized as safe (GRAS) or subject to a prior sanction justify additional action of this type, this proposed new section will also be used for that purpose.

Some of these food additives were prohibited from use in food on the conclusion that the available evidence did not establish safety, and not on the basis of a determination that the ingredient was in fact unsafe. Section 409 of the act places the burden on the manufacturer or distributor of a food additive to prove its safety prior to use. Accordingly, the Commissioner recognizes that, as additional scientific information becomes available, it may well be possible to approve one or more of these ingredients for food use and thus to delete it from this section. The proposed regulation provides for such transfers to and from this section on the Commissioner's initiative or on the petition of any interested person.

The fact that a substance does not appear on this list of prohibited substances does not mean that it may lawfully be used in food. This proposed new section includes only a partial list of prohibited substances, for easy reference purposes, and is not a complete list of substances that may not lawfully be used in food. Before any substance may be used in food, it must meet all of the applicable requirements of section 401 and 409 of the act.

Accordingly, the Commissioner of Food and Drugs concludes that it is in the public interest and will promote efficient enforcement of the act to provide

a section in the food additive regulations to contain a listing of food ingredients for which use in food has been prohibited.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (secs. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1785-1787, as amended; 21 U.S.C. 321(s), 348, 371(a)) and under authority delegated to him (21 CFR 2.120) the Commissioner proposes that Trade Correspondence No. 377 (December 29, 1941) be revoked, and that Title 21 of the Code of Federal Regulations be amended as follows:

## §§ 3.14, 3.33 and 3.65 [Revoked]

1. That Part 3 be amended by revoking §§ 3.14, 3.33 and 3.65.

2. That Part 121 be amended by adding the following new section:

## § 121.106 Substances prohibited from use in food.

(a) The food ingredients listed in this section have been prohibited from use in food by the Food and Drug Administration because of a determination that they present a potential risk to the public health or have not been shown by adequate scientific data to be safe for use in food. Use of any of these substances in violation of this section causes the food involved to be adulterated in violation of the act.

(b) This section includes only a partial list of substances prohibited from use in food, for easy reference purposes, and is not a complete list of substances that may not lawfully be used in food. No substance may be used in food unless it meets all applicable requirements of the act.

(c) The Commissioner of Food and Drugs, either on his own initiative or on behalf of any interested person who has submitted a petition, may publish a proposal to establish, amend, or repeal a regulation under this section on the basis of new scientific evaluation or information. Any such petition shall include an adequate scientific basis to support the petition, shall be in the form set forth in § 2.65 of this chapter, and will be published for comment if it contains reasonable grounds.

(d) Substances prohibited from direct addition to food:

(1) *Calamus, oil of calamus, extract of calamus.* (i) Calamus is the dried rhizome of *Acorus calamus* L. It has been used as a flavoring compound, especially as the oil extract.

(ii) Food containing any added calamus, oil of calamus, or extract of calamus is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of May 9, 1968 (33 FR 6967).

(iii) The analytical method used for detecting oil of calamus ( $\beta$ -asarone) is in "Journal of the Association of Official Analytical Chemists" vol. 56, No. 5 (Sept. 1973).

(2) *Dulcin.* (i) Dulcin is the chemical 4-ethoxyphenylurea,  $C_{12}H_{13}N_2O_3$ . It is a synthetic chemical having a sweet taste about 250 times that of sucrose, is not found in natural products at levels detectable by the official methodology, and

has been proposed for use as an artificial sweetener.

(ii) Food containing any added or detectable level of dulcin is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of January 19, 1950 (15 FR 321).

(iii) The analytical methods used for detecting dulcin in food are in §§ 20.133 through 20.136 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(3) *P-4000.* (i) P-4000 is the chemical 5-nitro-2-n-propoxyaniline,  $C_{12}H_{13}N_2O_3$ . It is a synthetic chemical having a sweet taste about 4000 times that of sucrose, is not found in natural products at levels detectable by the official methodology, and has been proposed for use as an artificial sweetener.

(ii) Food containing any added or detectable level of P-4000 is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of January 19, 1950 (15 FR 321).

(iii) The analytical methods used for detecting P-4000 in food are in §§ 20.137 through 20.141 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(4) *Coumarin.* (i) Coumarin is the chemical 1,2-benzopyrone  $C_9H_6O_2$ . It is found in tonka beans and extract of tonka beans, among other natural sources, and is also synthesized. It has been used as a flavoring compound.

(ii) Food containing any added coumarin as such or as a constituent of tonka beans or tonka extract is deemed to be adulterated under the act based upon an order published in the FEDERAL REGISTER of March 5, 1953 (19 FR 1239).

(iii) The analytical methods used for detecting coumarin in food are in §§ 19.104 through 19.023 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(5) *Cyclamate; calcium, sodium, magnesium and potassium.* (i) Calcium, sodium, magnesium and potassium salts of cyclohexane sulfamic acid,  $(C_6H_{11}NO_2S)_2Ca$ ,  $C_6H_{11}NO_2S \cdot NaNO_2$ ,  $(C_6H_{11}NO_2S)_2Mg$ , and  $C_6H_{11}NO_2S \cdot KNO_2$ . Cyclamates are synthetic chemicals having a sweet taste 30 to 40 times that of sucrose, are not found in natural products at levels detectable by the official methodology, and have been used as artificial sweeteners.

(ii) Food containing any added or detectable level of cyclamate is deemed adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of October 21, 1969 (34 FR 17063).

(iii) The analytical methods used for detecting cyclamate in food are in §§ 20.127 through 20.132 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(6) *Safrole.* (i) Safrole is the chemical 4-allyl-1,2-methylene-dioxybenzene  $C_{10}H_{12}O_2$ . It is a natural constituent of the sassafras plant. Oil of sassafras is about

<sup>1</sup> Copies may be obtained from: Association of Official Analytical Chemists, P.O. Box 540, Benjamin Franklin Station, Washington, D.C. 20044.

80 percent safrole, isosafrole and dihydro-safrole and derivatives of safrole, and have been used as flavors.

(ii) Food containing any added safrole, oil of sassafras, dihydro-safrole, or safrole or as a constituent of any food or extract is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of December 3, 1960 (25 FR 12412).

(iii) The analytical method used for detecting safrole, isosafrole and dihydro-safrole is in "Journal of the Association of Official Analytical Chemists" vol. 54, pp. 900-902 (1971).

(7) *Monochloroacetic acid.* (1) Monochloroacetic acid is the chemical chloroacetic acid  $C_2H_3ClO_2$ . It is a synthetic chemical not found in natural products, and has been proposed as a preservative in alcoholic and non-alcoholic beverages. Monochloroacetic acid is permitted in food package adhesives with an accepted migration level up to 10 ppb under § 121.2520. The official methods do not detect monochloroacetic acid at the 10 ppb level.

(ii) Food containing any added or detectable level of monochloroacetic acid is deemed adulterated in violation of the act based upon trade correspondence dated December 29, 1941 (TC-377).

(iii) The analytical methods used for detecting monochloroacetic acid in food are in §§ 20.057 through 20.062 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(8) *Thiourea.* (1) Thiourea is the chemical thiocarbamide  $CH_2N_2S$ . It is a synthetic chemical, is not found in natural products at levels detectable by the official methodology, and has been proposed as an antimicrobial for use in dipping citrus.

(ii) Food containing any added or detectable level of thiourea is deemed to be adulterated under the act.

(iii) The analytical methods used for detecting thiourea are in §§ 20.099 through 20.100 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(9) *Cobaltous Salts; acetate, chloride and sulfate.* (1) Cobaltous salts are the chemicals  $Co(C_2H_3O_2)_2$ ,  $CoCl_2$  and  $CoSO_4$ . They have been used in fermented malt beverages as a foam stabilizer and to prevent "gushing".

(ii) Food containing any added cobaltous salts is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of August 12, 1966 (31 FR 8788).

(10) *NDGA (Nordihydroguaiaretic acid).* (1) Nordihydroguaiaretic acid is the chemical 4,4-(2,3-dimethyltetramethylene) dipyrrocatechol  $C_{28}H_{22}O_2$ . It occurs naturally in the resinous exudates of certain plants. The commercial product, which is synthesized, has been used as an antioxidant in foods.

See footnote 1 previous page.

(ii) Food containing any added NDGA is deemed to be adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of April 11, 1968 (33 FR 5619).

(iii) The analytical method used for detecting NDGA in food is in § 20.0008 of the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(11) *DEPC (Diethylpyrocarbonate).* (1) Diethylpyrocarbonate is the chemical pyrocarbonic acid diethyl ester,  $C_8H_{16}O_4$ . It is a synthetic chemical not found in natural products at levels detectable by available methodology and has been used as a ferment inhibitor in alcoholic and non-alcoholic beverages.

(ii) Food containing any added or detectable level of DEPC is deemed adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of August 2, 1972 (37 FR 15426).

(e) Substances prohibited from indirect addition to food through use in food contact surfaces:

(1) *Flectol H.* (1) Flectol H is the chemical 1,2-Dihydro-2,2,4-trimethylquinoline, polymerized ( $C_{21}H_{27}N$ ). It is a synthetic chemical not found in natural products, and has been used as a component of food packaging adhesives.

(ii) Food containing any added or detectable level of this substance is deemed adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of April 7, 1967 (32 FR 5675).

(2) *4,4'-Methylenebis (2-chloroaniline).* (1) 4,4'-Methylenebis (2-chloroaniline) has the molecular formula,  $C_{12}H_8Cl_2N_2$ . It is a synthetic chemical not found in natural products and has been used as a polyurethane curing agent and as a component of food packaging adhesive and polyurethane resins.

(ii) Food containing any added or detectable level of this substance is deemed adulterated in violation of the act based upon an order published in the FEDERAL REGISTER of December 2, 1969 (34 FR 19073).

Interested persons may on or before October 24, 1973, file with the Hearing Clerk, Food and Drug Administration, Rm. 6-88, 5600 Fishers Lane, Rockville, MD 20852, written comments (preferably in quintuplicate) regarding this proposal. Comments may be accompanied by a memorandum or brief in support thereof. Received comments may be seen in the above office during working hours, Monday through Friday.

Dated: July 19, 1973.

A. M. SCHMIDT,  
Commissioner of Food and Drugs.  
[FR Doc. 73-18216 Filed 7-25-73; 8:46 am]

[ 21 CFR Part 121 ]

REMOVAL OF CERTAIN SUBSTANCES FROM THE GRAS LIST REVIEW

Notice of Withdrawal of Proposal

In the FEDERAL REGISTER of April 13, 1973 (38 FR 9316), the Commissioner of

Food and Drugs proposed to delete 52 substances from the current GRAS review and to delist these same substances from § 121.101 (21 CFR 121.101). The basis for this proposed deletion and delisting was the absence of reported use or production of the substances during 1970. The use and production survey of the industry was conducted by the National Academy of Sciences, through its Food Protection Committee of the National Research Council, under contract with the Food and Drug Administration.

One hundred and eighty comments were received in response to the proposal. Eighty-seven of these comments indicated usage of the GRAS substances in animal feeds, 37 in nutrient pharmaceutical preparations, 18 in indirect food ingredients, and 38 in direct human food use.

In the direct human use category, the comments reported the use of 43 of the 52 GRAS substances listed in the proposal. These comments gave numerous reasons for not participating in the NAS Survey, including non-solicitation by NAS. Although most of the comments were in agreement with the intent of the proposal, each requested specific exceptions.

As a result of the above comments, the Commissioner recognizes that there is sufficient commercial interest in these GRAS food substances to retain them in the current GRAS review. Accordingly, notice is hereby given that the 52 substances as published in the FEDERAL REGISTER on April 13, 1973 (38 FR 9310), will remain in § 121.101 (21 CFR 121.101), pending the results of this review.

Dated: July 19, 1973.

A. M. SCHMIDT,  
Commissioner of Food and Drugs.  
[FR Doc. 73-18222 Filed 7-25-73; 8:45 am]

[ 21 CFR Part 121 ]

CAROB BEAN GUM

Proposed Transfer From GRAS List to Food Additive Regulation for Direct Human Food Use and Affirmation of GRAS Status as Indirect Human Food Ingredient

The Food and Drug Administration is conducting a comprehensive study of direct human food ingredients classified as generally recognized as safe (GRAS) or subject to a prior sanction. Pursuant to this review, the safety of carob bean gum has been evaluated. In accordance with the provisions of §§ 121.40 and 121.41, the Commissioner of Food and Drugs proposes to affirm the GRAS status of this ingredient for indirect human food use and to transfer the ingredient to a food additive regulation for direct human food use. The Commissioner also proposes to establish a new § 121.105, under which all indirect human food ingredients affirmed as GRAS will be listed.

As the review of GRAS and prior-sanctioned direct human food ingredients progresses, these ingredients will be