

Dated October 21, 1983.

William F. Randolph,  
Acting Associate Commissioner for  
Regulatory Affairs.

[FR Doc. 83-30369 Filed 11-14-83; 8:45 am]

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## 21 CFR Parts 182 and 184

[Docket No. 78N-0198]

### GRAS Status of Dextrin

**AGENCY:** Food and Drug Administration.  
**ACTION:** Final rule.

**SUMMARY:** The Food and Drug Administration (FDA) is affirming that dextrin is generally recognized as safe (GRAS) as a direct human food ingredient. The safety of this ingredient has been evaluated under the comprehensive safety review conducted by the agency.

**DATES:** Effective December 15, 1983. The Director of the Federal Register approves the incorporation by reference of certain publications in 21 CFR 184.1277 effective on December 15, 1983.

**FOR FURTHER INFORMATION CONTACT:** John Dawson, Bureau of Foods (HFF-335), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202-426-9463.

#### SUPPLEMENTARY INFORMATION:

Subsequently, the agency published a tentative final rule in the *Federal Register* of August 20, 1982 (47 FR 36437), in which FDA proposed not to include the levels of use and food categories in the GRAS regulation on dextrin. The tentative final rule provided an opportunity for public comment on this change.

In the *Federal Register* of March 27, 1979 (44 FR 18246), FDA published a proposal to affirm that dextrin is GRAS for use as a direct human food ingredient. The proposal was published in accordance with the announced FDA review of the safety of GRAS and prior-sanctioned food ingredients.

No comments were received in response to the agency's tentative final rule on dextrin. The agency is therefore issuing the tentative final rule as a final rule without change.

The agency has previously determined under 21 CFR 25.24(d)(6) (proposed December 11, 1979; 44 FR 71742) that this action is of the type that does not individually or cumulatively have a significant impact on the human environment. FDA has not received any new information or comments that would alter its previous determination.

In accordance with the Regulatory Flexibility Act, the agency has

previously considered the potential effects that this rule would have on small entities, including small businesses. In accordance with section 605(b) of the Regulatory Flexibility Act, the agency has determined that no significant impact on a substantial number of small entities would derive from this action. FDA has not received any new information or comments that would alter its previous determination.

In accordance with Executive Order 12291, the agency has previously considered the potential economic effects of this regulation. As announced in the tentative final rule, the agency has determined that the rule is not a major rule as determined by that Order. FDA has not received any new information or comments that would alter its previous determination.

The agency's findings of no major economic impact and no significant impact on a substantial number of small entities, and the evidence supporting these findings, are contained in a threshold assessment which may be seen in the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857.

#### List of Subjects

##### 21 CFR Part 182

Generally recognized as safe (GRAS) food ingredients, Spices and flavorings.

##### 21 CFR Part 184

Direct food ingredients, Food ingredients, Generally recognized as safe (GRAS) food ingredients, Incorporation by reference.

Therefore, under the Federal Food, Drug, and Cosmetic Act (secs. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348, 371(a))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10) Parts 182 and 184 are amended as follows:

### PART 182—SUBSTANCES GENERALLY RECOGNIZED AS SAFE

#### 1. Part 182 is amended:

##### § 182.70 [Amended]

a. In § 182.70 *Substances migrating from cotton and cotton fabrics used in dry food packaging* by removing the entry for "Corn dextrin."

##### § 182.90 [Amended]

b. In § 182.90 *Substances migrating to food from paper and paperboard products* by removing the entry for "Dextrin".

### PART 184—DIRECT FOOD SUBSTANCES AFFIRMED AS GENERALLY RECOGNIZED AS SAFE

2. By adding new § 184.1277, to read as follows:

#### § 184.1277 Dextrin.

(a) Dextrin [(C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>)<sub>n</sub>·H<sub>2</sub>O, CAS Reg. No. 9004-53-9] is an incompletely hydrolyzed starch. It is prepared by dry heating corn, waxy maize, waxy milo, potato, arrowroot, wheat, rice, tapioca, or sago starches, or by dry heating the starches after: (1) Treatment with safe and suitable alkalis, acids, or pH control agents and (2) drying the acid or alkali treated starch.

(b) The ingredient meets the specification of the Food Chemicals Codex, 3d Ed. (1981), p. 96, which is incorporated by reference. Copies are available from the National Academy Press, 2101 Constitution Ave. NW., Washington, DC 20418, or available for inspection at the Office of the Federal Register, 1100 L St. NW., Washington, DC 20408.

(c) In accordance with § 184.1(b)(1), the ingredient is used in food with no limitation other than current good manufacturing practice. The affirmation of this ingredient as generally recognized as safe (GRAS) as a direct human food ingredient is based upon the following current good manufacturing practice conditions of use:

(1) The ingredient is used as a formulation aid as defined in § 170.3(o)(14) of this chapter; as a processing aid as defined in § 170.3(o)(24) of this chapter; as a stabilizer and thickener as defined in § 170.3(o)(28) of this chapter; and as a surface-finishing agent as defined in § 170.3(o)(30) of this chapter.

(2) The ingredient is used in food at levels not to exceed current good manufacturing practice.

(d) Prior sanctions for this ingredient different from the uses established in this section do not exist or have been waived.

*Effective date.* This regulation shall be effective December 15, 1983.

(Secs. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348, 371(a)).)

Dated: October 24, 1983.

William F. Randolph,  
Acting Associate Commissioner for  
Regulatory Affairs.

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**21 CFR Parts 182 and 184**

[Docket No. 81N-0329]

**GRAS Status of Vitamin A****AGENCY:** Food and Drug Administration.**ACTION:** Final rule.

**SUMMARY:** The Food and Drug Administration (FDA) is affirming that vitamin A (including vitamin A acetate and vitamin A palmitate) is generally recognized as safe (GRAS) as a direct human food ingredient. The safety of these ingredients has been evaluated under the comprehensive safety review conducted by the agency.

**EFFECTIVE DATE:** December 15, 1983. The Director of the Federal Register approves the incorporation by reference of certain publications at 21 CFR 184.1930 effective on December 15, 1983.

**FOR FURTHER INFORMATION CONTACT:** John W. Gordon, Bureau of Foods (HFF-335), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202-426-5487.

**SUPPLEMENTARY INFORMATION:** In the Federal Register of January 14, 1983 (48 FR 1745), FDA published a proposal to affirm that vitamin A (including vitamin A acetate and vitamin A palmitate, hereafter called vitamin A) is GRAS for use as a direct human food ingredient. The proposal was published in accordance with the announced FDA review of the safety of GRAS and prior-sanctioned food ingredients.

In accordance with § 170.35 (21 CFR 170.35), copies of the scientific literature review, mutagenic evaluation, teratologic evaluation, and the report of the Select Committee on GRAS Substances (the Select Committee) on vitamin A are available for public review in the Dockets Management Branch (HFA-305), Food and Drug Administration, RM. 4-62, 5600 Fishers Lane, Rockville, MD 20857. Copies of these documents also are available for public purchase from the National Technical Information Service, as announced in the proposal.

In addition to proposing to affirm the GRAS status of vitamin A, FDA gave public notice that it was unaware of any prior-sanctioned food uses for this ingredient other than the proposed conditions of use. Persons asserting additional or extended uses in accordance with approvals granted by the U.S. Department of Agriculture or FDA before September 6, 1958, were given notice to submit proof of those sanctions, so that the safety of any prior-sanctioned uses could be determined. That notice was also an opportunity to have prior-sanctioned

uses of vitamin A recognized by issuance of an appropriate regulation under Part 181—Prior Sanctioned Food Ingredients (21 CFR Part 181) or affirmed as GRAS under Part 184 and 186 (21 CFR Part 184 or 186), as appropriate.

FDA also gave notice that failure to submit proof of an applicable prior sanction in response to the proposal would constitute a waiver of the right to assert that sanction at any future time.

No reports of prior-sanctioned uses for vitamin A were submitted in response to the proposal. Therefore, in accordance with the proposal, any right to assert a prior sanction for the use of vitamin A under conditions different from those set forth in this final rule has been waived.

No comments were received in response to the agency's proposal on vitamin A. The agency is therefore issuing the proposed regulation as a final rule without change.

The agency has previously determined under 21 CFR 25.24(d)(6) (proposed December 11, 1979; 44 FR 71742) that this action is of a type that does not individually or cumulatively have a significant impact on the human environment. FDA has not received any new information or comments that would alter its previous determination.

In accordance with the Regulatory Flexibility Act, the agency has previously considered the potential effects that this rule would have on small entities, including small businesses. In accordance with section 605(b) of the Regulatory Flexibility Act, the agency has determined that no significant impact on a substantial number of small entities would derive from this action. FDA has not received any new information or comments that would alter its previous determination.

In accordance with Executive Order 12291, the agency has previously considered the potential economic effects of this regulation. As announced in the proposal, the agency has determined that the rule is not a major rule as determined by the Order. FDA has not received any new information or comments that would alter its previous determination.

The agency's findings of no major economic impact and no significant impact on a substantial number of small entities, and the evidence supporting these findings, are contained in a threshold assessment which may be seen in the Dockets Management Branch (address above).

**List of Subjects****21 CFR Part 182**

Generally recognized as safe (GRAS) food ingredients, Spices and flavoring.

**21 CFR Part 184**

Direct food ingredients, Food ingredients, Generally recognized as safe (GRAS) food ingredients, Incorporation by reference.

Therefore, under the Federal Food, Drug, and Cosmetic Act (secs. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348, 371(a))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10), Parts 182 and 184 are amended as follows:

**PART 182—SUBSTANCES GENERALLY RECOGNIZED AS SAFE**

§§ 182.8930, 182.8933, and 182.8936  
[Removed]

1. Part 182 is amended by removing § 182.8930 *Vitamin A*, § 182.8933 *Vitamin A acetate*, and § 182.8936 *Vitamin A palmitate*.

**PART 184—DIRECT FOOD SUBSTANCES AFFIRMED AS GENERALLY RECOGNIZED AS SAFE**

2. Part 184 is amended by adding new § 184.1930, to read as follows:

**§ 184.1930 Vitamin A.**

(a)(1) Vitamin A (retinol; CAS Reg. No. 68-20-8) is the alcohol 9,13-dimethyl-7-(1,1,5-trimethyl-6-cyclohexen-5-yl)-7,9,11,13-nonatetraen-15-ol. It may be nearly odorless or have a mild fishy odor. Vitamin A is extracted from fish liver oils or produced by total synthesis from  $\beta$ -ionone and a propargyl halide.

(2) Vitamin A acetate (retinyl acetate; CAS Reg. No. 127-47-9) is the acetate ester of retinol. It is prepared by esterifying retinol with acetic acid.

(3) Vitamin A palmitate (retinyl palmitate; CAS Reg. No. 79-81-2) is the palmitate ester of retinol. It is prepared by esterifying retinol with palmitic acid.

(b) The ingredient meets the specifications for vitamin A in the Food Chemicals Codex, 3d Ed. (1981), p. 342, which is incorporated by reference. Copies are available from the National Academy Press, 2101 Constitution Ave. NW., Washington, DC 20418, or available for inspection at the Office of the Federal Register, 1100 L St. NW., Washington, DC 20408.

(c) In accordance with § 184.1(b)(1), the ingredient is used in food with no limitation other than current good manufacturing practice. The affirmation



of this ingredient as generally recognized as safe (GRAS) as a direct human food ingredient is based upon the following current good manufacturing practice conditions of use:

(1) The ingredient is used in food as a nutrient supplement as defined in § 170.3(c)(20) of this chapter.

(2) The ingredient is used in foods at levels not to exceed current good manufacturing practice. Vitamin A may be used in infant formula in accordance with section 412(g) of the Federal Food, Drug, and Cosmetic Act (the act) or with regulations promulgated under section 412(a)(2) of the act.

(d) Prior sanctions for this ingredient different from the uses established in this section do not exist or have been waived.

**Effective date.** This regulation shall be effective December 15, 1983.

(Secs. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348, 371(a)).)

Dated: October 24, 1983.

William F. Randolph,  
Acting Associate Commissioner for  
Regulatory Affairs.

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## 21 CFR Part 184

[Docket No. 80N-0107]

### GRAS Status of Maltodextrin

**AGENCY:** Food and Drug Administration.  
**ACTION:** Final rule.

**SUMMARY:** The Food and Drug Administration (FDA) is affirming that maltodextrin is generally recognized as safe (GRAS) as a direct human food ingredient. The safety of this ingredient has been evaluated under the comprehensive safety review conducted by the agency.

**EFFECTIVE DATE:** December 15, 1983.

**FOR FURTHER INFORMATION CONTACT:** John Dawson, Bureau of Foods (HFF-335), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202-426-9463.

**SUPPLEMENTARY INFORMATION:** In the Federal Register of August 20, 1982 (47 FR 36443), FDA published a proposal to affirm that maltodextrin and GRAS for use as a direct human food ingredient. The proposal was published in accordance with the announced FDA review of the safety of GRAS and prior-sanctioned food ingredients.

In accordance with § 170.35 (21 CFR 170.35), copies of the report of the Select Committee on GRAS Substances (the Select Committee) on the health aspects

of corn sugar (dextrose), corn syrup, and invert sugar food ingredients and the Select Committee's statement on maltodextrin are available for public review in the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857. The former may also be purchased from the National Technical Information Service, as announced in the proposal.

In addition to proposing to affirm the GRAS status of maltodextrin, FDA gave public notice that it was unaware of any prior-sanctioned food uses for this ingredient other than for the proposed conditions of use. Persons asserting additional or extended uses in accordance with approvals granted by the U.S. Department of Agriculture or FDA before September 6, 1958, were given notice to submit proof of those sanctions, so that the safety of any prior-sanctioned uses could be determined. That notice was also an opportunity to have prior-sanctioned uses of maltodextrin recognized by issuance of an appropriate regulation under Part 181—Prior-Sanctioned Food Ingredients (21 CFR Part 181) or affirmed as GRAS under Part 184 or 186 (21 CFR Part 184 or 186), as appropriate.

FDA also gave notice that failure to submit proof of an applicable prior sanction in response to the proposal would constitute a waiver of the right to assert that sanction at any future time.

No reports of prior-sanctioned uses for maltodextrin were submitted in response to the proposal. Therefore, in accordance with the proposal, any right to assert a prior sanction for use of maltodextrin under conditions different from those set forth in this final rule has been waived.

No comments were received in response to the agency's proposal on maltodextrin. The agency is therefore issuing the proposed regulation as a final rule without change.

In the proposal, FDA stated that it would work with the Committee on Codex Specifications (now known as the Committee on Food Chemicals Codex) of the National Academy of Sciences to develop acceptable specifications for maltodextrin used as a direct food ingredient and would incorporate those specifications into the regulation when they were developed. To date, however, work on the specifications is still incomplete. Until the specifications are developed, maltodextrin for direct food uses must comply with the description in § 184.1444 and be of food-grade purity (21 CFR 182.1(b)(3) and 170.30(h)(1)).

The agency has previously determined under 21 CFR 25.24(d)(8) (proposed December 11, 1979; 44 FR 71742) that this

action is of a type that does not individually or cumulatively have a significant impact on the human environment. FDA has not received any new information or comments that would alter its previous determination.

In accordance with the Regulatory Flexibility Act, the agency has previously considered the potential effects that this rule would have on small entities, including small businesses. In accordance with section 605(b) of the Regulatory Flexibility Act, the agency has determined that no significant impact on a substantial number of small entities would derive from this action. FDA has not received any new information or comments that would alter its previous determination.

In accordance with Executive Order 12291, the agency has previously considered the potential economic effects of this regulation. As announced in the proposal, the agency has determined that the rule is not a major rule as determined by that Order. FDA has not received any new information or comments that would alter its previous determination.

The agency's findings of no major economic impact and no significant impact on a substantial number of small entities, and the evidence supporting these findings, are contained in a threshold assessment which may be seen in the Dockets Management Branch (address above).

### List of Subjects in 21 CFR Part 184

Direct food ingredients, Food ingredients, Generally recognized as safe (GRAS) food ingredients.

Therefore, under the Federal Food, Drug, and Cosmetic Act (secs. 201(s), 409, 701(a), Stat. 1055, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348, 371(a))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10), Part 184 is amended by adding new § 184.1444, to read as follows:

### PART 184—DIRECT FOOD SUBSTANCES AFFIRMED AS GENERALLY RECOGNIZED AS SAFE

#### § 184.1444 Maltodextrin.

(a) Maltodextrin ((C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>)<sub>n</sub>, CAS Reg. No. 9050-36-6) is a nonsweet nutritive saccharide polymer that consists of D-glucose units linked primarily by α-1-4 bonds and that has a dextrose equivalent (D.E.) of less than 20. It is prepared as a white powder or concentrated solution by partial hydrolysis of corn starch with safe and suitable acids and enzymes.



(b) FDA is developing food-grade specifications for maltodextrin in cooperation with the National Academy of Sciences. In the interim, this ingredient must be of a purity suitable for its intended use.

(c) In accordance with § 184.1(b)(1), the ingredients is used in food with no limitation other than current good manufacturing practice.

(d) Prior sanctions for this ingredient different from the uses established in this section do not exist or have been waived.

**Effective date.** This regulation shall be effective December 15, 1983.

(Sec. 201(s), 409, 701(a), 52 Stat. 1055, 72 Stat. 1784-1789 as amended (21 U.S.C. 321(s), 348, 371(a)).)

Dated: October 24, 1983.

William F. Randolph,

Acting Associate Commissioner for  
Regulatory Affairs.

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## 21 CFR Parts 436 and 450

[Docket No. 83N-0343]

### Tests and Methods of Assay of Antibiotic and Antibiotic-Containing Drugs; High-Pressure Liquid Chromatographic Assay for Bleomycin Fractions

**AGENCY:** Food and Drug Administration.

**ACTION:** Final rule.

**SUMMARY:** The Food and Drug Administration (FDA) is amending the antibiotic drug regulations to provide for an improved method for quantitative determination of the content of the various bleomycin fractions in bleomycin sulfate. The new method, high-pressure liquid chromatographic assay, replaces the column chromatographic assay currently specified in the regulations. This action is intended to improve drug quality.

**DATES:** Effective November 15, 1983; comments, notice of participation, and request for hearing by December 15, 1983; data information, and analyses to justify a hearing by January 16, 1984.

**ADDRESS:** Written comments to the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857.

**FOR FURTHER INFORMATION CONTACT:** Joan M. Eckert, National Center for Drugs and Biologics (HFN-140), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857; 301-443-4290.

**SUPPLEMENTARY INFORMATION:** FDA is replacing the column chromatographic assay currently specified in the regulations for the quantitative determination of bleomycin components of bleomycin sulfate with a high-pressure liquid chromatographic (HPLC) assay. Based on a collaborative study with an international and a foreign health care laboratory and the sole manufacturer of the drug, the agency has determined that the HPLC assay is faster and more sensitive than the method being replaced in the regulations.

In addition, because the HPLC assay method is capable of separating the bleomycin A<sub>2</sub> component from other minor bleomycin components, the lower content limit for bleomycin A<sub>2</sub> is revised from 60 percent to 55 percent to reflect the accurate quantitation of the bleomycin A<sub>2</sub> component.

The data generated by the collaborative study on which the agency relies in amending the antibiotic drug regulations are on public display in the Dockets Management Branch (address above).

The agency has determined pursuant to 21 CFR 25.24(b)(22) (proposed December 11, 1979; 44 FR 71742) that this action is of a type that does not individually or cumulatively have a significant impact on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

### List of Subjects

#### 21 CFR Part 436

Antibiotics.

#### 21 CFR Part 450

Antibiotics, Antitumor.

Therefore, under the Federal Food, Drug, and Cosmetic Act (secs. 507, 701 (f) and (g), 52 Stat. 1055-1056 as amended, 59 Stat. 483 as amended (21 U.S.C. 357, 371 (f) and (g))) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10), Parts 436 and 450 are amended as follows:

### PART 436—TESTS AND METHODS OF ASSAY OF ANTIBIOTIC AND ANTIBIOTIC-CONTAINING DRUGS

1. Part 436 is amended by adding new § 436.339 to read as follows:

§ 436.339 High-pressure liquid chromatographic assay for bleomycin fractions.

(a) *Equipment.* A high-pressure liquid chromatograph equipped with:

- (1) Two solvent pumps;
- (2) A solvent programmer;

(3) A low dead volume cell 8 to 20 microliters;

(4) A light path length of 1 centimeter;

(5) A suitable ultraviolet detection system operating at a wavelength of 254 nanometers;

(6) A suitable recorder;

(7) A suitable integrator; and

(8) A suitable-sized column approximately 25 centimeters in length having an inside diameter of 4.6 millimeters and packed with octadecyl silane chemically bonded to porous silica or ceramic microparticles, 5 to 10 micrometers in diameter, USP XX.

(b) *Reagents*—(1) 0.005M 1-pentanesulfonic acid in 0.5 percent acetic acid adjusted to pH 4.3 with concentrated ammonium hydroxide. Filter and degas before using.

(2) *Methanol, spectrophotometric grade.* Filter and degas before using.

(3) *Mobile phase.* Adjust the solvent programmer for linear gradient development starting with a mixture of 0.005M 1-pentanesulfonic acid:methanol (9:1) and ending with a mixture of 0.005M 1-pentanesulfonic acid:methanol (6:4) in 1 hour at a flow rate of 1.2 milliliters per minute. Minor flow rate and gradient changes can be made as necessary depending on column and instrument conditions. Disodium ethylenediaminetetraacetic acid USP at a concentration of 0.005M may be added to the mobile phase if necessary for satisfactory performance.

(c) *Preparation of sample solution.* Reconstitute the vial with 6 milliliters of deaerated water.

(d) *Procedure.* Using the equipment and reagents listed in paragraphs (a) and (b) of this section, start pumping the mobile solvent at the initial conditions. Inject 10 microliters of the sample solution into the chromatograph and begin the linear gradient pumping program. After the final mobile phase conditions are reached (1 hour) continue to pump the solvent mixture for an additional 20 minutes or until the demethylbleomycin A<sub>2</sub> is eluted. The elution order is void volume, bleomycinic acid, bleomycin A<sub>2</sub>, bleomycin A<sub>3</sub>, bleomycin B<sub>2</sub>, bleomycin B<sub>4</sub>, and demethylbleomycin A<sub>2</sub>.

(e) *Calculations.* Calculate the percentage of each bleomycin by comparing its peak area contribution to that of the total response of all the bleomycins.

### PART 450—ANTITUMOR ANTIBIOTIC DRUGS

2. Part 450 is amended in § 450.10a by revising paragraphs (a)(1)(ix) and (b)(9) to read as follows: