that a hearing is held. Failure to include such a description and analysis for any particular objection shall constitute a waiver of the right to a hearing on the objection. Three copies of all documents are to be submitted and are to be identified with the docket number found in brackets in the heading of this document. Any objections received in response to the regulation may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

XI. References

The following references have been placed on display in the Dockets Management Branch (address above) and may be seen by interested persons between 9 a.m. and 4 p.m., Monday through Friday.

1. Renstrom, B., G. Borch, O. M. Skulberg, and S. Liaaen-Jensen, ''Optical Purity of (3S,3′S)-Astaxanthin from *Haematococcus pluvialis*,'' *Phytochemistry*, 20:2561–2564, 1981.

2. Sommer, T. R., W. T. Potts, and N. M. Morrissy, ''Utilization of Microalgal Astaxanthin by Rainbow Trout (*Oncorhynchus mykiss*),'' *Aquaculture*, 94:79–88, 1991.

3. Kitahara, T., ''Carotenoids in the Pacific Salmon During the Marine Period,'' *Comprehensive Biochemistry and Physiology*, 78B:859–862, 1984.

4. Mori, T., K. Makabe, K. Yamaguchi, S. Konosu, and S. Arai, ''Comparison Between Krill Astaxanthin Diester and Synthesized Free Astaxanthin Supplemented to Diets in Their Absorption and Deposition by Juvenile Coho Salmon (*Oncorhynchus kisutch*),'' *Comprehensive Biochemistry and Physiology*, 93B:255–258, 1989.

5. Johnson, C. B., Memorandum entitled ''*Haematococcus pluvialis* Algae Meal for Use in Feed for Salmonids: Final Toxicology Review'' from the Division of Health Effects Evaluation (HFS–225) to the Division of Petition Control (HFS–215), Center for Food Safety and Applied Nutrition, FDA, August 12, 1999.

List of Subjects in 21 CFR Part 73

Color additives, Cosmetics, Drugs, Foods, Medical devices.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, 21 CFR part 73 is amended as follows:

PART 73—LISTING OF COLOR ADDITIVES EXEMPT FROM CERTIFICATION

1. The authority citation for 21 CFR part 73 continues to read as follows:

Authority: 21 U.S.C. 321, 341, 342, 343, 348, 351, 352, 355, 361, 362, 371, 379e.

2. Section 73.185 is added to subpart A to read as follows:

§ 73.185 Haematococcus algae meal.

(a) *Identity.* (1) The color additive haematococcus algae meal consists of the comminuted and dried cells of the alga *Haematococcus pluvialis*.

(2) Haematococcus algae meal may be added to the fish feed only as a component of a stabilized color additive mixture. Color additive mixtures for fish feed use made with haematococcus algae meal may contain only those diluents that are suitable and are listed in this subpart as safe for use in color additive mixtures for coloring foods.

(b) *Specifications.* Haematococcus algae meal shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by good manufacturing practice:

Physical state, solid.

Lead, not more than 5 parts per million.

Arsenic, not more than 2 parts per million.

Mercury, not more than 1 part per million.

Heavy metals (as Pb), not more than 10 parts per million.

Astaxanthin, not less than 1.5 percent.

(c) *Uses and restrictions.* Haematococcus algae meal may be safely used in the feed of salmonid fish in accordance with the following prescribed conditions:

(1) The color additive is used to enhance the pink to orange-red color of the flesh of salmonid fish.

(2) The quantity of astaxanthin in finished feed, from haematococcus algae meal when used alone or in combination with other astaxanthin color additive sources listed in this part 73, shall not exceed 80 milligrams per kilogram (72 grams per ton) of finished feed.

(d) *Labeling requirements.* (1) The labeling of the color additive and any premixes prepared therefrom shall bear expiration dates for the sealed and open container (established through generally accepted stability testing methods), other information required by § 70.25 of this chapter, and adequate directions to prepare a final product complying with the limitations prescribed in paragraph (c) of this section.

(2) The presence of the color additive in finished fish feed prepared according to paragraph (c) of this section shall be declared in accordance with § 501.4 of this chapter.

(3) The presence of the color additive in salmonid fish that have been fed feeds containing haematococcus algae meal shall be declared in accordance with §§ 101.22(b), (c), and (k)(2), and 101.100(a)(2) of this chapter.

(e) *Exemption from certification.* Certification of this color additive is not necessary for the protection of the public health, and therefore batches thereof are exempt from the certification requirements of section 721(c) of the act.

Dated: June 27, 2000.

Margaret M. Dotzel,

Associate Commissioner for Policy.

[FR Doc. 00–17018 Filed 7–5–00; 8:45 am]

BILLING CODE 4160–01–F

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 73

[Docket No. 97C–0466]

Listing of Color Additives Exempt From Certification; Phaffia Yeast

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the color additive regulations to provide for the safe use of phaffia yeast as a color additive in the feed of salmonid fish to enhance the color of their flesh. This action is in response to a petition filed by Archer Daniels Midland Co.

DATES: This rule is effective August 8, 2000; except as to any provisions that may be stayed by the filing of proper objections. Submit written objections and requests for a hearing by August 7, 2000.

ADDRESSES: Submit written objections to the Dockets Management Branch (HFA–305), Food and Drug Administration, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: Aydin Orstan, Center for Food Safety and Applied Nutrition (HFS–215), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202–418–3076.

SUPPLEMENTARY INFORMATION:

I. Introduction

In a notice published in the **Federal Register** of November 19, 1997 (62 FR 61823), FDA announced that a color additive petition (CAP 8C0252) had been filed by Archer Daniels Midland Co., P.O. Box 1470, Decatur, IL 62525. The petition proposed to amend the color additive regulations to provide for the safe use of astaxanthin from *Phaffia*

rhodozyma as a color additive in salmonid fish feeds. During its review of the petition, the agency determined that the subject color additive is more accurately described as a dried preparation of the yeast *P. rhodozyma* that contains astaxanthin. Therefore, the agency is establishing phaffia yeast as the common or usual name of the color additive.

II. Identity, Technical Effect, and Specifications

Phaffia yeast consists of the cells of the yeast *P. rhodozyma* that are produced by pure culture fermentation and subsequently killed by heat and dried. *P. rhodozyma* is the asexual form of the yeast species *Xanthophyllomyces dendrorhous* (Ref. 1). The major components of phaffia yeast are proteins, carbohydrates, and lipids produced by the yeast cells. The primary coloring substance in phaffia yeast is astaxanthin (3,3′-dihydroxy-β,β-carotene-4,4′-dione) (Ref. 2). One published (Ref. 3) and several unpublished studies included in the petition showed that phaffia yeast satisfactorily pigmented the flesh of the fish when it was fed to salmonid fish.

In a final rule published in the **Federal Register** of April 13, 1995 (60 FR 18736), the agency listed astaxanthin in § 73.35 (21 CFR 73.35) for use in the feed of salmonid fish. In the preamble to that rule, the agency stated that the new regulation for astaxanthin did not specify the source of astaxanthin or the manufacturing process, because the agency had made its safety determination for astaxanthin based on the chemical similarity of synthetic astaxanthin to astaxanthin from natural sources. The agency concluded that any source could be used to produce the color additive as long as the astaxanthin meets the identity, specifications, and stability requirements defined in § 73.35, and it is manufactured in accordance with good manufacturing practice. Furthermore, the agency stated in the astaxanthin rule that the specifications were listed to convey the fact that FDA had evaluated only a particular form of the color additive. The agency also stated that it was concerned that deleterious materials not found in the habitat of salmonids may be included in fish feed from biomass products that contain only a small amount of astaxanthin with the rest of the material being residues from the producing organisms. Thus, the agency said that interested parties should submit information in the form of a new color additive petition if they wish to market a biomass product containing astaxanthin.

Phaffia yeast is a biomass product that contains a relatively small amount of astaxanthin with the rest of the material being proteins, carbohydrates, and lipids. In addition, the petitioner indicated that phaffia yeast would not meet the specifications in § 73.35(b) for solubility in chloroform, absorption maximum wavelength, and residue on ignition, because some of the yeast components in phaffia yeast would interfere with the test methods. Furthermore, the petitioner specified the astaxanthin content of phaffia yeast to be not less than 0.4 percent, whereas the corresponding specification for astaxanthin in § 73.35(b) is not less than 96 percent. Therefore, the petitioner requested that a new regulation be established for phaffia yeast as a source of astaxanthin. The agency agrees with the petitioner that a new regulation is necessary to list phaffia yeast.

During the fish feeding studies, phaffia yeast was mixed with fish feed in such quantities that the amount of astaxanthin in finished feeds did not exceed 80 milligrams per kilogram. The agency based its safety determination on this amount of astaxanthin and the petitioner requested that this level be specified in the listing regulation. However, the agency notes that astaxanthin in the feed of farm-raised salmonid fish may come not only from phaffia yeast, but also from the use of the color additive astaxanthin meeting the specifications of § 73.35 and other color additives that are sources of astaxanthin the agency may list in the future. Therefore, newly added § 73.355(c)(2) (21 CFR 73.355(c)(2)) requires that the quantity of astaxanthin in finished feed, from phaffia yeast when used alone or in combination with other astaxanthin color additive sources listed in part 73 (21 CFR part 73), shall not exceed 80 milligrams per kilogram (72 grams per ton) of finished feed.

III. Safety Evaluation

In evaluating the safety of the use of phaffia yeast in fish feed, the agency considered: (1) The safety of astaxanthin in phaffia yeast to humans and fish, and (2) the safety of the other components in phaffia yeast to humans and fish.

A. Safety of Astaxanthin

Astaxanthin is the principal pigment that imparts the pink or red coloring characteristic of the flesh of wild salmonids (Ref. 3). These fish obtain astaxanthin from the crustaceans that constitute a significant portion of their diet. A similar flesh color may be obtained in aquacultured salmonids by feeding them a diet supplemented with astaxanthin. In the final rule of April 13, 1995, the agency concluded that astaxanthin was safe for use in the feed of salmonid fish. This conclusion was based on the following facts: (1) The petitioned use of astaxanthin would result in deposition of a very small amount of astaxanthin in salmonid flesh; (2) astaxanthin that was the subject of the final rule of April 13, 1995, differed from astaxanthin present in the flesh of wild salmon only in its optical isomeric distribution; (3) human exposure to astaxanthin from consumption of aquacultured salmon fed synthetic astaxanthin is comparable to the exposure to astaxanthin from wild salmon. In addition, the results of the toxicity studies submitted by the petitioner supported the conclusion that there was reasonable certainty of no harm from the petitioned use of astaxanthin.

In the final rule of April 13, 1995, the facts upon which the agency concluded that astaxanthin was safe for use in the feed of salmonid fish are similar to the facts upon which the agency is basing its conclusion that astaxanthin from the petitioned use of phaffia yeast is safe for use in the feed of salmonid fish. During the review of the present petition, the agency determined that astaxanthin from phaffia yeast differed from astaxanthin present in the flesh of wild salmon only in its optical isomeric distribution and that the petitioned use of astaxanthin would result in deposition of a very small amount of astaxanthin in salmonid flesh. Furthermore, the agency determined that the astaxanthin from phaffia yeast will substitute for the fish feed uses of astaxanthin listed in § 73.35, and that the petitioned use of phaffia yeast will not increase the estimated daily intake of astaxanthin in humans, which is comparable to the exposure to astaxanthin from wild salmon. Therefore, the agency concludes that astaxanthin from the petitioned use of phaffia yeast is safe for use in the feed of salmonid fish.

B. Safety of the Producing Organism

The yeast *P. rhodozyma* naturally produces astaxanthin (Refs. 2 and 3). The parent strain of *P. rhodozyma* used by the petitioner was originally obtained from a natural source. From this parent strain a new strain that produces more astaxanthin was derived using classical mutagenesis (nonrecombinant deoxyribonucleic acid (DNA)) techniques.

Based on the data in the petition and other relevant material, the agency determined that: (1) consumers will not be directly exposed to phaffia yeast, but to astaxanthin remaining in fish that

have consumed the yeast in their diet; (2) there is no evidence that any constituents other than astaxanthin will accumulate in fish maintained on diets supplemented with phaffia yeast; (3) the results of studies during which rats and fish were fed phaffia yeast and bacterial mutagenicity tests did not reveal any adverse effects on these organisms, indicating the absence of toxic impurities in the yeast; (4) a literature search uncovered no reports of pathogenicity or toxicogenicity of *P. rhodozyma*; and (5) various yeasts are commonly used as feed in fish aquaculture with no deleterious effects on fish health. Based on this information, FDA concludes that the petitioned use of *P. rhodozyma* is safe (Ref. 4).

IV. Stability of Astaxanthin in Phaffia Yeast

Based on the results of stability studies of phaffia yeast submitted by the petitioner, FDA concludes that to minimize chemical changes that would result in loss of color of astaxanthin, phaffia yeast must be added to fish feed only in the form of a stabilized color additive mixture. Therefore, newly added § 73.355(a)(2) requires that phaffia yeast be added to fish feed only as a component of a stabilized color additive mixture.

V. Labeling Requirements

All color additives, in accordance with § 70.25 (21 CFR 70.25), require sufficient information to assure their safe use and to allow a determination of compliance with any limitations imposed by the agency in other applicable regulations. Therefore, the labeling of the color additive, phaffia yeast, and any mixture prepared therefrom, is subject to the requirements of § 70.25.

According to § 70.25(a)(4), an expiration date for a color additive must be stated on its label if stability data require it. FDA finds that because of the instability of astaxanthin in phaffia yeast, an expiration date must be stated on the label of sealed and open containers, in accordance with § 70.25(a)(4). FDA also finds that declaration of the expiration date constitutes a material fact that must be disclosed on the label of the color additive mixture under sections 201(n) and 403(a)(1) of the Federal Food, Drug, and Cosmetic Act (the act) (21 U.S.C. 321(n) and 343(a)(1)) because failure to do so would constitute a failure to reveal facts material in light of the representations made on the label and material with respect to consequences which may result from the use of the color additive. The use of phaffia yeast requires the declaration of expiration dates because astaxanthin in phaffia yeast can decompose to products that would not be coloring agents and thus would not affect the color of salmonid flesh.

In addition to the requirements for labeling the color additive or color additive mixture, the ingredient list on fish feed, to which phaffia yeast is added, must identify the presence of the color additive under 21 CFR 501.4. New § 73.355(d)(2) references § 501.4 to ensure that the presence of phaffia yeast as a color additive in the fish feed will be declared on the ingredient label.

Finally, the presence of the color additive must be declared on the label of any food, including salmonid fish, containing added phaffia yeast and food containing such salmonid fish as an ingredient. Section 101.22(b) (21 CFR 101.22(b)) requires a food that bears or contains artificial coloring, such as salmon artificially colored with phaffia yeast, to bear labeling even though such food is not in package form. Section 101.22 requires that label statements of artificial coloring be ''likely to be read by the ordinary person under customary conditions of purchase and use of such food.''

Furthermore, § 101.22(k)(2) requires, in the statement of ingredients for a food to which any coloring has been added, and for which the coloring is not subject to certification, a declaration that makes it clear that a color additive has been used in the food. In addition, the presence of a color additive must be declared on any bulk container of food containing a color additive that is held at a retail establishment under the provisions in § 101.100(a)(2) (21 CFR 101.100(a)(2)). The ingredient label would prevent economic fraud in salmonid fish containing added phaffia yeast because the ingredient label would notify the consumer that the fish is artificially colored. Without such ingredient labeling, food comprising salmonid fish with added phaffia yeast would be deemed to be misbranded under section 403(k) of the act, which states that: A food shall be deemed to be misbranded ''If it bears or contains any artificial flavoring, artificial coloring, or chemical preservative, unless it bears labeling stating that fact * * *.''

Therefore, in accordance with §§ 101.22(b), (c), and (k)(2), and 101.100(a)(2), labeling on any salmonid fish containing phaffia yeast is required to declare the presence of the color additive or color additive mixture. New § 73.355(d)(3) references §§ 101.22(b), (c), and (k)(2), and 101.100(a)(2) to ensure that, at the retail level, the presence of phaffia yeast as a color additive in the fish will be declared, and that the labeling of the bulk fish container, including a list of ingredients, will be displayed on the container or on a counter card with similar information. In the future, the agency also intends to propose to amend § 73.35(d)(3) to include references to § 101.22(b) and (c).

VI. Conclusion

Based on the data in the petition and other relevant material, FDA concludes that the petitioned use of phaffia yeast as a color additive in fish feed to color the flesh of salmonid fish is safe, the additive will achieve its intended technical effect, and therefore, part 73 should be amended as set forth below. In addition, based upon the factors listed in 21 CFR 71.20(b), the agency concludes that certification of phaffia yeast is not necessary for the protection of the public health.

VII. Inspection of Documents

In accordance with § 71.15 (21 CFR 71.15), the petition and the documents that FDA considered and relied upon in reaching its decision to approve the petition are available for inspection at the Center for Food Safety and Applied Nutrition by appointment with the information contact person listed above. As provided in § 71.15, the agency will delete from the documents any materials that are not available for public disclosure before making the documents available for inspection.

VIII. Environmental Impact

The agency has previously considered the environmental effects of this rule as announced in the notice of filing for CAP 8C0252 (November 19, 1997, 62 FR 61823). No new information or comments have been received that would affect the agency's previous determination that there is no significant impact on the human environment and that an environmental impact statement is not required.

IX. Paperwork Reduction Act of 1995

This final rule contains no collections of information. Therefore, clearance by the Office of Management and Budget under the Paperwork Reduction Act of 1995 is not required.

X. Objections

Any person who will be adversely affected by this regulation may at any time file with the Dockets Management Branch (address above) written objections by August 7, 2000. Each objection shall be separately numbered,

and each numbered objection shall specify with particularity the provisions of the regulation to which objection is made and the grounds for the objection. Each numbered objection on which a hearing is requested shall specifically so state. Failure to request a hearing for any particular objection shall constitute a waiver of the right to a hearing on that objection. Each numbered objection for which a hearing is requested shall include a detailed description and analysis of the specific factual information intended to be presented in support of the objection in the event that a hearing is held. Failure to include such a description and analysis for any particular objection shall constitute a waiver of the right to a hearing on the objection. Three copies of all documents are to be submitted and are to be identified with the docket number found in brackets in the heading of this document. Any objections received in response to the regulation may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday. FDA will publish notice of the objections that the agency has received or lack thereof in the **Federal Register**.

XI. References

1. Golubev, W. I., ''Perfect State of *Rhodomyces dendrorhous (Phaffia rhodozyma)*,'' *Yeast*, 11:101–110, 1995.

2. Andrewes, A. G., H. J. Phaff, and M. P. Starr, ''Carotenoids of *Phaffia rhodozyma*, a Red-Pigmented Fermenting Yeast,'' *Phytochemistry*, 15:1003–1007, 1976.

3. Johnson, E. A., D. E. Conklin, and M. J. Lewis, ''The Yeast *Phaffia rhodozyma* as a Dietary Pigment Source for Salmonids and Crustaceans,'' *Journal of the Fishers Research Board of Canada*, 34:2417–2421, 1977.

4. Johnson, C. B., memorandum entitled ''Astaxanthin from *Phaffia rhodozyma:* Final Toxicology Review'' from the Division of Health Effects Evaluation (HFS–225) to the Division of Petition Control (HFS–215), Center for Food Safety and Applied Nutrition, FDA, August 12, 1999.

List of Subjects in 21 CFR Part 73

Color additives, Cosmetics, Drugs, Foods, Medical devices.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, 21 CFR part 73 is amended as follows:

PART 73—LISTING OF COLOR ADDITIVES EXEMPT FROM CERTIFICATION

1. The authority citation for 21 CFR part 73 continues to read as follows:

Authority: 21 U.S.C. 321, 341, 342, 343, 348, 351, 352, 355, 361, 362, 371, 379e.

2. New § 73.355 is added to subpart A to read as follows:

§ 73.355 Phaffia yeast.

(a) *Identity*. (1) The color additive phaffia yeast consists of the killed, dried cells of a nonpathogenic and nontoxicogenic strain of the yeast *Phaffia rhodozyma*.

(2) Phaffia yeast may be added to the fish feed only as a component of a stabilized color additive mixture. Color additive mixtures for fish feed use made with phaffia yeast may contain only those diluents that are suitable and are listed in this subpart as safe for use in color additive mixtures for coloring foods.

(b) *Specifications*. Phaffia yeast shall conform to the following specifications and shall be free from impurities other than those named to the extent that such impurities may be avoided by good manufacturing practice:

Physical state, solid.

Lead, not more than 5 parts per million.

Arsenic, not more than 2 parts per million.

Mercury, not more than 1 part per million.

Heavy metals (as Pb), not more than 10 parts per million.

Astaxanthin, not less than 0.4 percent.

(c) *Uses and restrictions*. Phaffia yeast may be safely used in the feed of salmonid fish in accordance with the following prescribed conditions:

(1) The color additive is used to enhance the pink to orange-red color of the flesh of salmonid fish.

(2) The quantity of astaxanthin in finished feed, from phaffia yeast when used alone or in combination with other astaxanthin color additive sources listed in this part 73, shall not exceed 80 milligrams per kilogram (72 grams per ton) of finished feed.

(d) *Labeling requirements*. (1) The labeling of the color additive and any premixes prepared therefrom shall bear expiration dates for the sealed and open container (established through generally accepted stability testing methods), other information required by § 70.25 of this chapter, and adequate directions to prepare a final product complying with the limitations prescribed in paragraph (c) of this section.

(2) The presence of the color additive in finished fish feed prepared according to paragraph (c) of this section shall be declared in accordance with § 501.4 of this chapter.

(3) The presence of the color additive in salmonid fish that have been fed feeds containing phaffia yeast shall be declared in accordance with §§ 101.22(b), (c), and (k)(2) and 101.100(a)(2) of this chapter.

(e) *Exemption from certification*. Certification of this color additive is not necessary for the protection of the public health, and therefore batches thereof are exempt from the certification requirements of section 721(c) of the act.

Dated: June 27, 2000.

Margaret M. Dotzel,

Associate Commissioner for Policy.

[FR Doc. 00–17019 Filed 7–5–00; 8:45 am]

BILLING CODE 4160–01–F

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 524

Ophthalmic and Topical Dosage Form New Animal Drugs; Furazolidone Aerosol Powder

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the animal drug regulations to reflect approval of a supplemental new animal drug application (NADA) filed by Fort Dodge Animal Health, a Division of American Cyanamid Co. The supplemental NADA provides for removal of that portion of the approval reflecting topical cattle use of furazolidone aerosol powder.

DATES: This regulation is effective July 6, 2000.

FOR FURTHER INFORMATION CONTACT: Mohammad I. Sharar, Center for Veterinary Medicine (HFV–216), Food and Drug Administration, 7500 Standish Pl., Rockville, MD 20855, 301–827–6642.

SUPPLEMENTARY INFORMATION: Fort Dodge Animal Health, a 1Division of American Cyanamid Co., P.O. Box 1339, Fort Dodge, IA 50501, is the sponsor of NADA 32–319 for Furox (furazolidone) aerosol powder for use in dogs, horses, ponies, and cattle. The sponsor filed a supplemental NADA requesting removal of topical ocular use of the product in cattle. The supplemental NADA is approved as of November 29, 1999, and the regulations are amended in 21 CFR