U.S. FOOD & DRUG ADMINISTRATION

Human Foods Program

Sunny Tsai
Runke Bioengineering (Fujian) Co., Ltd.
West of No. 552 Rd.
Jindu Industrial Clusters Zone
Zhao'an, CHINA

Re: GRAS Notice No. GRN 001185

Dear Sunny Tsai:

The Food and Drug Administration (FDA, we) is responding to GRN 001185 from Runke Bioengineering (Fujian) Co., Ltd. (Runke), which we received on April 3, 2024, and filed on May 9, 2024. You requested that we cease our evaluation of this notice on February 5, 2025. On February 8, 2025, you withdrew your request that we cease to evaluate your notice.

The subject of the notice is algal oil (≥35% docosahexaenoic acid) from *Schizochytrium* sp. "FJRK-SCH3" (algal oil (≥35% DHA)) for use as an ingredient in the same food categories as those listed in 21 CFR 184.1472(a)(3) (Menhaden oil)[1] at use levels that are no more than 28.57% of the levels specified for menhaden oil in that regulation. Runke states that if algal oil (≥35% DHA) is blended with another source of DHA or eicosapentaenoic acid (EPA), the levels will be no more than 1.5 g of DHA/person (p)/d and no more than 3.0 g/p/d of DHA and EPA combined. Algal oil (≥35% DHA) is also intended for use as an ingredient in cow milk-, goat milk-, soy-, amino acid-, and extensively hydrolyzed protein-based, non-exempt infant formula for term infants and exempt infant formula for pre-term and low birthweight infants, at a maximum level of 0.5% (w/w) of total fat as DHA in combination with a safe and suitable source of arachidonic acid (ARA) at a ratio ranging from 1:1 to 1:2 of DHA to ARA.[2] The notice provides food-grade specifications for algal oil (≥35% DHA), including a specification for *Cronobacter* spp. The notice informs us of Runke's view that these uses of algal oil (≥35% DHA) are GRAS through scientific procedures.

In a phone call on February 4, 2025, we communicated with you regarding safety concerns with Runke's handling of a positive *Cronobacter* spp. batch in GRN 001186,[3]

[1] Runke states that algal oil (≥35% DHA) is not intended for use in products under the U.S. Department of Agriculture's jurisdiction.
[2] Based on other information available to us, we determined that the subject of this notice was not used in food, including infant formula, in the U.S.
[3] Fungal oil (≥38% arachidonic acid (ARA)) from *Mortierella alpina* "FJRK-MA01" (*M. alpina* oil) is the subject of GRN 001186. We evaluated this notice and responded in a letter dated February 4, 2025,

which Runke submitted at the same time as GRN 001185. The subject of GRN 001186 is manufactured in the same facility as the subject of GRN 001185. The positive test result in GRN 001186 indicated that the notice's food-grade specification for *Cronobacter* spp. in this ingredient was not met. We explained our safety concerns in an Insufficient Basis letter for GRN 001186.[2] In an email dated February 5, 2025, Runke stated that its factory is in the process of being renovated and upgraded to ensure that it can produce food ingredients that meet U.S. regulatory standards and specifications. However, the sufficiency of these changes cannot be addressed within the regulatory timeframe of a GRAS notice.

FDA's regulation, specifically 21 CFR 170.230(c), establishes requirements in Part 2 of a GRAS notice for specifications for food-grade materials. The method of manufacture and specifications identified in a GRAS notice are relevant to the identity of the substance and are an important component of the safety assessment when establishing the safe conditions of use in food.[4] Because the food-grade specification for *Cronobacter* spp. in the subject of GRN 001186 was not met, the fact that the subject of GRN 001185 is manufactured in the same facility, and other information available to us demonstrating safety issues with the facility used to manufacture these ingredients, we have concerns about whether this ingredient would meet the relevant food-grade specification for *Cronobacter* spp. [5]

Conclusions

Based on the information that Runke provided, as well as other information available to us, we have questions regarding the safety of algal oil (≥35% DHA) produced by Runke due to known and potential contamination with *Cronobacter* spp. in Runke's manufacturing facility where the subject of GRN 001185 is produced. Given that efforts by Runke to address these safety concerns are still ongoing, the notice does not provide a sufficient basis for a conclusion of GRAS status for the intended use of algal oil (≥35% DHA) manufactured by Runke.

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stating that the notice does not provide a sufficient basis for a conclusion of GRAS status for the intended use of *M. alpina* oil manufactured by Runke.

[4] *See e.g.*, Reponses to comments 23 and 40, Substances Generally Recognized as Safe, Final Rule. 81 Fed. Reg. 54960, 54978-79 and 54984. (October 17, 2016); "Guidance for Industry: Assessing the Effects of Significant Manufacturing Process Changes, Including Emerging Technologies, on the Safety and Regulatory Status of Food Ingredients and Food Contact Substances, Including Food Ingredients that Are Color Additives,"
http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/ucm300661.htm, 2014.

[5] Our safety concerns are limited to algal oil (≥35% DHA) as manufactured by Runke. We are not questioning the safety of DHA-containing algal oil as evaluated by us in other GRNs. DHA-containing algal oil, in combination with a safe and suitable source of ARA, was the subject of GRNs 000553, 000677, 000731, 000776, 000777, 000862, 000933, 000934, 001008. We evaluated these notices and responded in letters dated July 19, 2015, May 2, 2017, April 6, 2018, October 26, 2018, October 26, 2018, June 15, 2020, November 13, 2020, July 20, 2021, February 25, 2022, respectively, stating that we had no questions at that time regarding the notifiers' GRAS conclusions.

In accordance with 21 CFR 170.275(b)(3), the text of this letter responding to GRN 001185 is accessible to the public at www.fda.gov/grasnoticeinventory.

Sincerely,

Susan J. Carlson -S

Digitally signed by Susan J. Carlson -S
Date: 2025.03.14 17:51:54 -04'00'

Susan J. Carlson, Ph.D.
Director
Division of Food Ingredients
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