II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2023/52

of 4 January 2023

authorising the placing on the market of 3-Fucosyllactose produced by a derivative strain of *Escherichia coli* BL21(DE3) as a novel food and amending Implementing Regulation (EU) 2017/2470

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) 2015/2283 of the European Parliament and of the Council of 25 November 2015 on novel foods, amending Regulation (EU) No 1169/2011 of the European Parliament and of the Council and repealing Regulation (EC) No 258/97 of the European Parliament and of the Council and Commission Regulation (EC) No 1852/2001 ([1]), and in particular Article 12 thereof,

Whereas:

(1) Regulation (EU) 2015/2283 provides that only novel foods authorised and included in the Union list of novel foods may be placed on the market within the Union.

(2) Pursuant to Article 8 of Regulation (EU) 2015/2283 Commission Implementing Regulation (EU) 2017/2470 ([2]) has established a Union list of novel foods.

(3) Commission Implementing Regulation (EU) 2021/2029 ([3]) authorised the placing on the Union market of 3-Fucosyllactose obtained by microbial fermentation using the genetically modified strain K12 MG1655 of *Escherichia coli ('E. coli')* as a novel food under Regulation (EU) 2015/2283.

(4) On 17 March 2020, the company Chr. Hansen A/S ('the applicant') submitted an application for an authorisation to the Commission in accordance with Article 10(1) of Regulation (EU) 2015/2283 to place 3-fucosyllactose ('3-FL') obtained by microbial fermentation using one genetically modified strain of *E. coli* BL21(DE3), on the Union market as a novel food. The applicant requested for 3-fucosyllactose to be used in infant formula and follow-on formula as defined in Regulation (EU) No 609/2013 of the European Parliament and of the Council ([4]), processed cereal-based

([1]) OJ L 327, 11.12.2015, p. 1.

([2]) Commission Implementing Regulation (EU) 2017/2470 of 20 December 2017 establishing the Union list of novel foods in accordance with Regulation (EU) 2015/2283 of the European Parliament and of the Council on novel foods (OJ L 351, 30.12.2017, p. 72).

([3]) Commission Implementing Regulation (EU) 2021/2029 of 19 November 2021 authorising the placing on the market of 3-Fucosyllactose (3-FL) as a novel food under Regulation (EU) 2015/2283 of the European Parliament and of the Council and amending Commission Implementing Regulation (EU) 2017/2470 (OJ L 415, 22.11.2021, p. 9).

([4]) Regulation (EU) No 609/2013 of the European Parliament and of the Council of 12 June 2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control and repealing Council Directive 92/52/EEC, Commission Directives 96/8/EC, 1999/21/EC, 2006/125/EC and 2006/141/EC, Directive 2009/39/EC of the European Parliament and of the Council and Commission Regulations (EC) No 41/2009 and (EC) No 953/2009 (OJ L 181, 29.6.2013, p. 35).

food for infants and young children and baby food for infants and young children as defined in Regulation (EU) No 609/2013, foods for infants and young children for special medical purposes as defined in Regulation (EU) No 609/2013, foods for special medical purposes as defined in Regulation (EU) No 609/2013 excluding foods for infants and young children, in milk-based drinks and similar products intended for young children, and in food supplements as defined in Directive 2002/46/EC of the European Parliament and of the Council ([5]) intended for the general population. Subsequently, on 17 June 2022, the applicant modified the initial request in the application on the use of 3-FL in food supplements to exclude infants and young children. The applicant also proposed that food supplements containing 3-FL should not be used if other foods with added 3-fucosyllactose are consumed the same day.

(5) On 17 March 2020, the applicant also made a request to the Commission for the protection of proprietary scientific studies and data submitted in support of the application, namely, the mass spectrometry ('MS'), nuclear magnetic resonance ('NMR') spectroscopy and high-performance anion-exchange chromatography with pulsed amperometric detection ('HPAEC-PAD') method validation and the results for the determination of the identity of 3-FL and carbohydrate by-products ([6]); a description of the genetically modified 3-FL production strain ([7]); a certificate of deposition of the genetically modified 3-FL production strain ([8]); real time quantitative polymerase chain reaction ('qPCR') system and method validation reports for the genetically modified 3-FL production strain ([9]); a bacterial reverse mutation test with 3-FL ([10]); an *in vitro* mammalian cell micronucleus test with 3-FL ([11]); a 7-day dose range finding oral toxicity study in rats with 3-FL ([12]); and, a 90-day oral toxicity study in rats with 3-FL ([13]).

(6) On 23 September 2020, the Commission requested the European Food Safety Authority ('the Authority') to carry out an assessment of 3-Fucosyllactose obtained by microbial fermentation using a genetically modified production strain derived from the host strain *E. coli* BL21(DE3), as a novel food in accordance with Article 10(3) of Regulation (EU) 2015/2283.

(7) On 29 April 2022, the Authority adopted its scientific opinion on the 'Safety of 3-fucosyllactose produced by a derivative strain of *Escherichia coli* BL21(DE3) as a novel food pursuant to Regulation (EU) 2015/2283' ([14]) in accordance with Article 11 of Regulation (EU) 2015/2283.

(8) In its scientific opinion, the Authority concluded that 3-FL is safe under the proposed conditions of use for the proposed target populations. Therefore, that scientific opinion gives sufficient grounds to establish that 3-FL, when used in infant formula and follow-on formula as defined in Regulation (EU) No 609/2013, processed cereal-based food for infants and young children and baby food for infants and young children as defined in Regulation (EU) No 609/2013, foods for infants and young children for special medical purposes as defined in Regulation (EU) No 609/2013, foods for special medical purposes as defined in Regulation (EU) No 609/2013 excluding foods for infants and young children, in milk-based drinks and similar products intended for young children, and in food supplements as defined in Directive 2002/46/EC, complies with the authorisation requirements of Article 12(1) of Regulation (EU) 2015/2283.

([5]) Directive 2002/46/EC of the European Parliament and of the Council of 10 June 2002 on the approximation of the laws of the Member States relating to food supplements (OJ L 183, 12.7.2002, p. 51).
([6]) Chr. Hansen 2019 and 2021 (unpublished).
([7]) Chr. Hansen 2019 and 2021 (unpublished).
([8]) Chr. Hansen 2020 (unpublished).
([9]) Chr. Hansen 2021 (unpublished).
([10]) Chr. Hansen 2018 (unpublished) and Parschat K., Oehme A., Leuschner J., Jennewein S., and Parkot J. 2020. A safety evaluation of mixed human milk oligosaccharides in rats. Food and Chemical Toxicology, 136, 111118.
([11]) Chr. Hansen 2018 (unpublished) and Parschat K., Oehme A., Leuschner J., Jennewein S., and Parkot J. 2020. A safety evaluation of mixed human milk oligosaccharides in rats. Food and Chemical Toxicology, 136, 111118.
([12]) Chr. Hansen 2018 and 2021 (unpublished) and Parschat K., Oehme A., Leuschner J., Jennewein S., and Parkot J. 2020. A safety evaluation of mixed human milk oligosaccharides in rats. Food and Chemical Toxicology, 136, 111118.
([13]) Chr. Hansen 2019 and 2021 (unpublished) and Parschat K., Oehme A., Leuschner J., Jennewein S., and Parkot J. 2020. A safety evaluation of mixed human milk oligosaccharides in rats. Food and Chemical Toxicology, 136, 111118.
([14]) *EFSA Journal* 2022;20(5):7329.

(9) In its scientific opinion, the Authority considered that it could not have reached its conclusions on the safety of the 3-FL without the scientific studies and data on the MS, NMR and HPAEC-PAD method validation and the results for the determination of the identity of 3-FL and of the carbohydrate by-products present in the novel food; the description of the genetically modified 3-FL production strain; the certificate of deposition of the genetically modified 3-fucosyllactose production strain; the qPCR system and method validation report for the genetically modified 3-FL production strain; the bacterial reverse mutation test with 3-FL; the *in vitro* mammalian cell micronucleus test with 3-FL; the 7-day dose range finding oral toxicity study in rats with 3-FL; and, the 90-day oral toxicity study in rats with 3-FL.

(10) The Commission requested the applicant to further clarify the justification provided with regard to their proprietary claim over those scientific studies and data, and to clarify their claim to an exclusive right of reference to them in accordance with Article 26(2)(b) of Regulation (EU) 2015/2283.

(11) The applicant declared that they held proprietary and exclusive rights of reference to the scientific studies and data on MS, NMR and HPAEC-PAD method validation and the results for the determination of the identity of 3-FL and of the carbohydrate by-products present in the novel food; the description of the genetically modified 3-FL production strain; the certificate of deposition of the genetically modified 3-FL production strain; the qPCR system and method validation report for the genetically modified 3-FL production strain; the bacterial reverse mutation test with 3-FL; the *in vitro* mammalian cell micronucleus test with 3-FL; the 7-day dose range finding oral toxicity study in rats with 3-FL; and, the 90-day oral toxicity study in rats with 3-FL, under national law at the time they submitted the application, and that third parties cannot lawfully access, use or refer to those data and studies.

(12) The Commission assessed all the information provided by the applicant and considered that the applicant has sufficiently substantiated the fulfilment of the requirements laid down in Article 26(2) of Regulation (EU) 2015/2283. Therefore, the scientific studies and data on MS, NMR and HPAEC-PAD method validation and the results for the determination of the identity of 3-FL and of the carbohydrate by-products present in the novel food; the description of the genetically modified 3-FL production strain; the certificate of deposition of the genetically modified 3-FL production strain; the qPCR system and method validation report for the genetically modified 3-FL production strain; the bacterial reverse mutation test with 3-FL; the *in vitro* mammalian cell micronucleus test with 3-FL; the 7-day dose range finding oral toxicity study in the rat with 3-FL; and, the 90-day oral toxicity study in the rat with 3-FL, should be protected in accordance with Article 27(1) of Regulation (EU) 2015/2283. Accordingly, only the applicant should be authorised to place 3-fucosyllactose produced with a derivative strain of *E. coli* BL21(DE3) on the market within the Union during a period of five years from the entry into force of this Regulation.

(13) However, restricting the authorisation of 3-FL produced with a derivative strain of *E. coli* BL21(DE3) and the reference to the scientific studies and data contained in the applicant's file for the sole use by them does not prevent subsequent applicants from applying for an authorisation to place on the market the same novel food provided that their application is based on legally obtained information supporting such an authorisation.

(14) In line with the conditions of use of food supplements containing 3-FL as proposed by the applicant and assessed by the Authority, it is necessary to inform consumers with an appropriate label that food supplements containing 3-FL should not be consumed by infants and children under 3 years of age and should not be used if other foods with added 3-FL are consumed the same day.

(15) It is appropriate that the inclusion of 3-FL produced with a derivative strain of *E. coli* BL21(DE3) as a novel food in the Union list of novel foods contains the information referred to in Article 9(3) of Regulation (EU) 2015/2283.

(16) 3-FL produced with a derivative strain of *E. coli* BL21(DE3) should be included in the Union list of novel foods set out in Implementing Regulation (EU) 2017/2470. The Annex to Implementing Regulation (EU) 2017/2470 should therefore be amended accordingly.

(17) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed,

HAS ADOPTED THIS REGULATION:

Article 1

(1) 3-Fucosyllactose produced with a derivative strain of *E. coli* BL21(DE3) is authorised to be placed on the market within the Union.

3-Fucosyllactose produced with a derivative strain of *E. coli* BL21(DE3) shall be included in the Union list of novel foods set out in Implementing Regulation (EU) 2017/2470.

(2) The Annex to Implementing Regulation (EU) 2017/2470 is amended in accordance with the Annex to this Regulation.

Article 2

Only the company Chr. Hansen A/S ([15]) is authorised to place on the market within the Union the novel food referred to in Article 1, for a period of five years from 25 January 2023, unless a subsequent applicant obtains an authorisation for that novel food without reference to the scientific data protected pursuant to Article 3 or with the agreement of Chr. Hansen A/S.

Article 3

The scientific data contained in the application file and fulfilling the conditions laid down in Article 26(2) of Regulation (EU) 2015/2283 shall not be used for the benefit of a subsequent applicant for a period of five years from the date of entry into force of this Regulation without the agreement of Chr. Hansen A/S.

Article 4

This Regulation shall enter into force on the twentieth day following that of its publication in *the Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 4 January 2023.

For the Commission
The President
Ursula VON DER LEYEN

([15]) Address: Bøge Allé 10-12, 2970 Hørsholm, Denmark.

ANNEX

The Annex to Implementing Regulation (EU) 2017/2470 is amended as follows:

(1) in Table 1 (Authorised novel foods), the following entry is inserted in alphabetical order:

Authorised novel food	Conditions under which the novel food may be used		Additional specific labelling requirements	Other requirements	Data Protection
'**3-Fucosyllactose ('3-FL') (produced by a derivative strain of *E. coli* BL21(DE3))**	Specified food category	Maximum levels	The designation of the novel food on the labelling of the foodstuffs containing it shall be '3-fucosyllactose'. The labelling of food supplements containing 3-Fucosyllactose (3-FL) shall bear a statement that (a) they should not be consumed by children under 3 years of age; (b) they should not be used if other foods containing added 3-Fucosyllactose are consumed on the same day.		Authorised on 25.1.2023. This inclusion is based on proprietary scientific evidence and scientific data protected in accordance with Article 26 of Regulation (EU) 2015/2283. Applicant: "Chr. Hansen A/S", Bøge Allé 10-12, 2970 Hørsholm, Denmark. During the period of data protection, the novel food 3-Fucosyllactose is authorised for placing on the market within the Union only by Chr. Hansen A/S unless a subsequent applicant obtains authorisation for the novel food without reference to the proprietary scientific evidence or scientific data protected in accordance with Article 26 of Regulation (EU) 2015/2283 or with the agreement of "Chr. Hansen A/S". End date of the data protection: 25.1.2028.'
	Infant formula as defined under Regulation (EU) No 609/2013	0,90 g/l in the final product ready for use, marketed as such or reconstituted as instructed by the manufacturer			
	Follow-on formula as defined under Regulation (EU) No 609/2013	1,20 g/l in the final product ready for use, marketed as such or reconstituted as instructed by the manufacturer			
	Processed cereal-based foods for infants and young children and baby foods for infants and young children as defined under Regulation (EU) No 609/2013	1,20 g/l or 1,20 g/kg in the final product ready for use, marketed as such or reconstituted as instructed by the manufacturer			
	Milk based drinks and similar products intended for young children	1,20 g/l in the final product ready for use, marketed as such or reconstituted as instructed by the manufacturer			
	Foods for special medical purposes for infants and young children as defined under Regulation (EU) No 609/2013	In accordance with the particular nutritional requirements of the infants and young children for whom the products are intended but in any case not higher than 0,9 g/l or 0,9 g/kg (if it is intended for infants from 0 until 6 months) and 1,2 g/l or 1,2 g/kg (if it is intended for infants of 6-12 months and/or for young children) in the final product ready for use, marketed as such or reconstituted as instructed by the manufacturer.			

	Foods for special medical purposes as defined under Regulation (EU) No 609/2013 excluding foods for infants and young children	In accordance with the particular nutritional requirements of the persons for whom the products are intended			
	Food Supplements as defined in Directive 2002/46/EC, for the general population, excluding infants and young children	3 g/day			

(2) in Table 2 (Specifications), the following entry is inserted in alphabetical order:

Authorised novel food	Specification
'3-Fucosyllactose ('3-FL') (produced by a derivative strain of *E. coli* BL21(DE3))	**Description:** 3-Fucosyllactose (3-FL) is a purified, white to off-white powder that is produced by microbial fermentation and contains limited levels of D-Lactose, L-Fucose, D-Galactose, and D-Glucose. **Definition:** Chemical name: β-D-Galactopyranosyl-(1 → 4)- [α-L-fucopyranosyl-(1 → 3)]- D-glucopyranose Chemical formula: $C_{18}H_{32}O_{15}$ Molecular mass: 488,44 Da CAS No: 41312-47-4 **Source:** A genetically modified strain of *Escherichia coli* BL21(DE3) **Characteristics/Composition:** 3-Fucosyllactose (% of dry matter): ≥ 90,0 % (w/w) D-Lactose (% of dry matter): ≤ 5,0 % (w/w) D-glucose (% of dry matter): ≤ 3,0 % (w/w) D-galactose (% of dry matter): ≤ 3,0 % (w/w) L-Fucose (% of dry matter): ≤ 3,0 % (w/w) Sum of other carbohydrates (% of dry matter) [a]: ≤ 5,0 % (w/w) Moisture: ≤ 9,0 % (w/w) Ash: ≤ 1,0 % (w/w) Residual protein: ≤ 0,01 % (w/w)

	Heavy metals and contaminants: Arsenic: ≤ 0,2 mg/kg Aflatoxin M1: ≤ 0,025 µg/kg **Microbiological criteria:** Standard plate count: ≤ 1 000 CFU (*)/g Enterobacteriaceae: ≤ 10 CFU/g *Salmonella* spp.: Absence in 25 g Yeast and mould: ≤ 100 CFU/g *Cronobacter* (*Enterobacter*) *sakazakii*.: Absence in 10 g Residual endotoxins: ≤ 10 EU (**)/mg

([a]) Sum of other carbohydrates = 100 (% (w/w) of dry matter) – quantified carbohydrates (% (w/w) of dry matter) – Ash (% (w/w) of dry matter).
(*) CFU: Colony Forming Units.
(**) EU: Endotoxin Units.'