COMMISSION IMPLEMENTING REGULATION (EU) 2022/1373

of 5 August 2022

authorising the placing on the market of iron hydroxide adipate tartrate 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(1) 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) On 21 February 2020, the company Nemysis Limited ('the applicant') submitted an application to the Commission in accordance with Article 10(1) of Regulation (EU) 2015/2283 to place iron hydroxide adipate tartrate ('IHAT') on the Union market as a novel food to be used as a source of iron in food supplements as defined in Directive 2002/46/EC of the European Parliament and of the Council ([3]), in the form of capsules, at levels up to 100 mg/day that would correspond to up to 36 mg iron (Fe) per day, intended for the general population excluding infants and young children. In the application, the applicant indicated that IHAT as engineered nanomaterial is a novel food within the meaning of Article 3(2)(a)(viii) of Regulation (EU) 2015/2283.

(4) On 21 February 2020, the applicant also made a request to the Commission for the protection of proprietary data for an *in vitro* mammalian cell micronucleus test ([4]), an *in vitro* mammalian cell gene mutation test using the thymidine kinase gene ([5]), and a 90-day oral toxicity study in rodents ([6]), submitted in support of the application.

(5) On 3 July 2020, the Commission, requested the European Food Safety Authority ('the Authority') to carry out an assessment of IHAT as a novel food.

(6) On 27 October 2021, the Authority adopted its scientific opinion on the 'Safety of Iron Hydroxide Adipate Tartrate as a Novel food pursuant to Regulation (EU) 2015/2283 and as a source of iron in the context of Directive 2002/46/EC' ([7]) in accordance with Article 11 of Regulation (EU) 2015/2283.

([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]) 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).
([4]) Nemysis Limited (2019, unpublished).
([5]) Nemysis Limited (2019, unpublished).
([6]) Nemysis Limited (2019, unpublished).
([7]) EFSA Journal 2021;19(12):6935.

(7) In its scientific opinion, the Authority concluded that IHAT is safe under the proposed conditions of use for the proposed target populations at levels not exceeding 100 mg/day and that it is a source from which iron is bioavailable. In that opinion however, the Authority noted that, since it had not set a tolerable Upper intake Limit ('UL'), the intake of iron from food supplements containing the novel food could exceed population guidance levels that have been set by Member States, and that the combined intake of iron from food supplements containing the novel food and the background diet would be high. In light of the Authority's considerations and of the pivotal role of iron in human physiology, growth and development, particularly in the early stages of life, and the rather fine line between beneficial and adverse health effects of iron depending on intakes, the Commission considers that a precautionary approach is needed.

(8) The Commission therefore requested the applicant to reconsider the levels of IHAT proposed in their application (levels up to 100 mg/day that would correspond to up to 36 mg iron (Fe) per day for the general population, excluding infants and young children). In response to the Commission's request, the applicant modified its request and proposed the use of IHAT at levels not exceeding 100 mg/day and limiting the corresponding iron levels to up to 30 mg Fe/day in food supplements intended for the adult population, and at levels not exceeding 50 mg IHAT/day and limiting the corresponding iron levels to up to 14 mg Fe/day in food supplements intended for children and adolescents under 18 years of age, excluding children under 4 years of age. In addition, the applicant indicated that it will adjust the levels of IHAT in food supplements placed on the market of a Member State to limit the corresponding maximum levels of iron to the guidance values set by that Member State for each age group of the population. The Commission considers that the revised uses would fulfil the conditions for the placing on the market of IHAT in accordance with Article 12(1) of Regulation (EU) 2015/2283.

(9) It is appropriate that the inclusion of IHAT 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.

(10) In the same scientific opinion, the Authority considered that, due to the presence of nickel in the novel food, the consumption of food supplements containing 100 mg of IHAT may elicit dermatitis related allergic reactions to persons of 10 years of age and younger that have been previously sensitised to nickel following skin contact as the intake of nickel from the novel food would not result in a Margin of Exposure ('MoE') for the intake of nickel deemed by the Authority to be of low health concern for children and adolescents under 18 years of age in the upper 95th percentile of dietary nickel exposure ([8]). However, in light of the modified proposed uses of the novel food at levels not exceeding 50 mg IHAT/day in food supplements intended for children and adolescents under 18 years of age and excluding children under 4 years of age, the intake of nickel from the novel food will be either above or close to the MoE considered by the Authority to be of low health concern, and will not contribute significantly in the overall intake of nickel from food and drinking water. Taking into account these considerations and the built-in conservativism in the Authority's intake assessment that used the 95th percentile dietary exposure to derive the nickel MoE of low health concern, the Commission considers that the risk of elicitation of contact dermatitis allergic reactions to that age group of the population is unlikely to manifest in real life situations. Therefore, the Commission considers that no labelling requirement provided for in Article 9(3)(b) of Regulation (EU) 2015/2283 is necessary as to allergenicity.

(11) In addition, in its scientific opinion, the Authority also considered that its conclusion on the safety of IHAT and the bioavailability of iron is closely linked to the specific physicochemical properties and particle size distribution and agglomeration profile of the novel food that is achieved by the combined effect of the use of the capsular form of the food supplements containing the novel food, and the absence of substances other than the adipate, tartrate and sodium chloride used in the production of IHAT. The Authority therefore considered that the safety profile of the novel food and the bioavailability of the nutrient source may be affected and will have to be assessed on a case by case basis, if other forms of food supplements (e.g. tablets, pastilles, sachets of powders, gummies, syrups, etc.) are used alone or in combination with adipate, tartrate and sodium chloride or with substances other than the adipate, tartrate and sodium chloride or, if other substances are used in the capsular forms of the food supplements. It is therefore appropriate that when other forms of food supplements (e.g. tablets, pastilles, sachets of powders, gummies, syrups, etc.) are used in combination with adipate, tartrate and sodium chloride or in combination with other substances, or if other substances are used in the capsular form food supplements containing the novel food, the particle size distribution and agglomeration state of the novel food should be in accordance with the authorised specifications and that the bioavailability of iron should be in accordance with the bioavailability assessed by the Authority in its scientific opinion.

([8]) EFSA Journal 2020;18(11):6268.

(12) In its scientific opinion, the Authority noted that its conclusion on the safety of the novel food was based on scientific data from the *in vitro* mammalian cell micronucleus test, the *in vitro* mammalian cell gene mutation test using the thymidine kinase gene, and the 90-day oral toxicity study in rodents, contained in the applicant's file, without which it could not have assessed the novel food and reached its conclusion.

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

(14) The applicant declared that it held proprietary and exclusive rights of reference to the scientific data from the *in vitro* mammalian cell micronucleus test, the *in vitro* mammalian cell gene mutation test using the thymidine kinase gene, and the 90-day oral toxicity study in rodents at the time they submitted the application, and that third parties cannot lawfully access, use or refer to those data.

(15) The Commission assessed all the information provided by the applicant and considered that they have sufficiently substantiated the fulfilment of the requirements laid down in Article 26(2) of Regulation (EU) 2015/2283. Therefore, the scientific data from the *in vitro* mammalian cell micronucleus test, the *in vitro* mammalian cell gene mutation test using the thymidine kinase gene and the 90-day oral toxicity study in rodents should be protected in accordance with Article 27(1) of Regulation (EU) 2015/2283. Accordingly, only the applicant should be authorised to place IHAT on the market within the Union during a period of 5 years from the entry into force of this Regulation.

(16) However, restricting the authorisation of IHAT and the reference to the scientific 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.

(17) IHAT is an engineered nanomaterial as defined in Article 3(2)(f) of Regulation (EU) 2015/2283. It is therefore appropriate that the novel food should be clearly indicated in the list of ingredients of the foodstuffs containing it followed by the word 'nano' in brackets, in accordance with Article 18 of Regulation (EU) No 1169/2011 of the European Parliament and of the Council ([9]).

(18) IHAT 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.

(19) 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. Iron hydroxide adipate tartrate is authorised to be placed on the market within the Union.

Iron hydroxide adipate tartrate 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.

([9]) Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004 (OJ L 304, 22.11.2011, p. 18).

Article 2

Only the company 'Nemysis Limited' ([10]) is authorised to place on the market within the Union the novel food referred to in Article 1, for a period of 5 years from 28 August 2022, 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 'Nemysis Limited'.

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 5 years from the date of entry into force of this Regulation without the agreement of 'Nemysis Limited'.

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, 5 August 2022.

For the Commission
The President
Ursula VON DER LEYEN

([10]) Address: Suite 4.01 Ormond Building 31-36 Ormond Quay Upper Arran Quay Dublin 7, D07 F6DC Dublin, Ireland.

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:

Authorised novel food	Conditions under which the novel food may be used		Additional specific labelling requirements	Other requirements	Data Protection
'**Iron hydroxide adipate tartrate**	*Specified food category*	*Maximum levels*	The designation of the novel food on the labelling of the foodstuffs containing it shall be 'iron hydroxide adipate tartrate (nano)'. The labelling of food supplements containing iron hydroxide adipate tartrate shall bear a statement that they should not be consumed by children and adolescents under the age of 18/children under 4 years of age (*) (*) Depending on the age group the food supplement is intended for.		Authorised on 28.8.2022. This inclusion is based on proprietary scientific data protected in accordance with Article 26 of Regulation (EU) 2015/2283. Applicant: Nemysis Limited, Suite 4.01 Ormond Building 31-36 Ormond Quay Upper Arran Quay Dublin 7, D07 F6DC, Dublin, Ireland. During the period of data protection, the novel food iron hydroxide adipate tartrate is authorised for placing on the market within the Union only by Nemysis Limited, unless a subsequent applicant obtains authorisation for the novel food without reference to the proprietary scientific data protected in accordance with Article 26 of Regulation (EU) 2015/2283 or with the agreement of Nemysis Limited. End date of the data protection: 28.8.2027.'
	Food supplements as defined in Directive 2002/46/EC for the adult population	≤ 100 mg/day (≤ 30 mg Fe/day)			
	Food supplements as defined in Directive 2002/46/EC for children and adolescents under 18 years of age, excluding children under 4 years of age	≤ 50 mg/day (≤ 14 mg Fe/day)			

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

Authorised novel food	Specification	
'Iron hydroxide adipate tartrate	**Description/Definition:** Iron hydroxide adipate tartrate (IHAT) is an odourless, engineered nanomaterial in powder form that is insoluble in water and is manufactured by a chemical synthesis involving a series of steps involving acid-base reaction, precipitation, filtration, and drying. The food supplements containing the novel food are manufactured in capsular form. Excess adipate, tartrate and sodium chloride are used at levels resulting from the production process to help stabilise IHAT and ensure the authorised particle size distribution. If other forms of food supplements (e. g. tablets, pastilles, sachets of powders, gummies, syrups, etc.) are used in combination with adipate, tartrate and sodium chloride or in combination with other substances, or if other substances are used in the capsular form food supplements containing the novel food, it must be ensured that the authorised IHAT particle size distribution is maintained.	
	Common name	Iron oxo-hydroxide adipate tartrate
	Other names	Iron hydroxide adipate tartrate, Iron oxyhydroxide adipate tartrate
	Trade name	IHAT
	CAS number	2460638-28-0
	Molecular formula (calculated)	$FeO_m(OH)_n(H_2O)_x(C_4H_6O_6)_y(C_6H_{10}O_4)_z$ *where: m and n are undefined as per accepted practice for ferric iron oxohydroxides* (*) x = 0,28-0,88 y = 0,78-1,50 z = 0,04-0,19 Tartaric ($C_4H_6O_6$) and adipic ($C_6H_{10}O_4$) acid are represented in their protonated form.
	Molecular weight	Average molecular weight: 35 803,4 Da (lower-upper bound: 27 670,5-45 319,4 Da)
	Characteristics/Composition: **Physical/chemical** Iron (% dry matter): 24,0-36,0 Adipate: (% dry matter): 1,5-4,5 Tartrate: (% dry matter): 28,0-40,0 Water content (%): 10,0-21,0 Sodium (% dry matter): 9,0-11,0 Chloride (% dry matter): 2,6-4,2	

	Phase distribution Soluble (%): 2,0-4,0 Nano (%): 92,0-98,0 Micro (%): 0,0-3,0 **Primary particle size** Median diameter ([1]): 1,5-2,3 nm Mean diameter ([1]): 1,8-2,8 nm Dv(10) ([2]): 1,5-2,5 nm Dv(50) ([2]): 2,5-3,5 nm Dv(90) ([2]): 5,0-6,0 nm **Heavy metals** Arsenic: < 0,80 mg/kg Nickel: < 50,0 mg/kg **Residual solvents** Ethanol: < 500 mg/kg **Microbiological criteria** Total aerobic microbial count: < 10 CFU/g Total yeast and mould count: < 10 CFU/g

(*) Cornell RM and Schwertmann U, 2003. The Iron Oxides: Structure, Properties, Reactions, Occurrences and Uses. 2nd Edition. Wiley. https://doi.org/10.1002/3527602097

([1]) Number-based (by Transmission Electron Microscopy (TEM)).

([2]) Volume-based (hydrodynamic diameter by Dynamic Light Scattering (DLS)); CFU: Colony Forming Units.'