COMMISSION IMPLEMENTING REGULATION (EU) 2022/415

of 11 March 2022

concerning the authorisation of malic acid, citric acid produced by *Aspergillus niger* DSM 25794 or CGMCC 4513/CGMCC 5751 or CICC 40347/CGMCC 5343, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid produced by *Bacillus coagulans* (LMG S-26145 or DSM 23965), or *Bacillus smithii* (LMG S-27890) or *Bacillus subtilis* (LMG S-27889) and calcium lactate as feed additives for all animal species

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition ([1]), and in particular Article 9(2) thereof,

Whereas:

(1) Regulation (EC) No 1831/2003 provides for the authorisation of additives for use in animal nutrition and for the grounds and procedures for granting such authorisation. Article 10 of that Regulation provides for the re-evaluation of additives authorised pursuant to Council Directive 70/524/EEC ([2]).

(2) DL-malic acid, citric acid, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid and calcium lactate were authorised without a time limit as feed additives for all animal species in accordance with Directive 70/524/EEC. Those additives were subsequently entered in the Register of feed additives as existing products, in accordance with Article 10(1) of Regulation (EC) No 1831/2003.

(3) In accordance with Article 10(2) of Regulation (EC) No 1831/2003 in conjunction with Article 7 thereof, applications were submitted for the re-evaluation of DL-malic acid, citric acid produced by *Aspergillus niger* DSM 25794 or CGMCC 4513/CGMCC 5751 or CICC 40347/CGMCC 5343, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid produced by *Bacillus coagulans* (LMG S-26145 or DSM 23965), *Bacillus smithii* (LMG S-27890) or *Bacillus subtilis* (LMG S-27889) and calcium lactate as feed additives for all animal species.

(4) The applicants requested those additives to be classified in the additive category 'technological additives' and in the functional group 'preservatives' or 'acidity regulators'. The applications were accompanied by the particulars and documents required under Article 7(3) of Regulation (EC) No 1831/2003.

(5) The European Food Safety Authority ('the Authority') concluded in it opinion of 29 January 2014 ([3]) that, under the proposed conditions of use, DL-malic acid does not have an adverse effect on animal health, consumer safety or the environment. It also concluded that the additive is irritant to skin, mucosae and eyes and the exposure via inhalation is a risk. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additive. The Authority also concluded that it is effective as a feed preservative.

([1]) OJ L 268, 18.10.2003, p. 29.
([2]) Council Directive 70/524/EEC of 23 November 1970 concerning additives in feedingstuffs (OJ L 270, 14.12.1970, p. 1).
([3]) EFSA Journal 2014;12(2):3563.

(6) The Authority concluded in its opinions of 27 January 2015 ([4]) that, under the proposed conditions of use, citric acid produced by *Aspergillus niger* DSM 25794 or CGMCC 4513/CGMCC 5751 or CICC 40347/CGMCC 5343 does not have an adverse effect on animal health, consumer safety or the environment. It also concluded that the additive has potentially hazardous effects on skin, mucosae, eyes and the exposure via inhalation is a risk. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additive. The Authority also concluded that the substance might have the potential to act as an acidity regulator in feedingstuff. However, its efficacy as a preservative, although well recognised in food, has not been sufficiently demonstrated due to the lack of statistical analysis provided by the design study.

(7) Despite the weakness of statistical demonstration of the provided studies, the authorisation already granted to citric acid for food use for the same function has been considered as a sufficient indication of the effectiveness of the substance as a preservative, under the conditions of Commission Regulation (EC) No 429/2008 ([5]).

(8) The Authority concluded in its opinions of 1 July 2014 ([6]) and 8 September 2015 ([7]) that, under the proposed conditions of use, sorbic acid and potassium sorbate do not have an adverse effect on animal health, consumer safety or the environment. It also concluded that the additives are irritant to skin, eyes and respiratory tract. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additives. The Authority also concluded that sorbic acid and potassium sorbate are authorised food additives in the Union for use as preservatives. It is reasonable to expect that the effect in food will be observed in feed when they are used at comparable concentrations and under similar conditions.

(9) The Authority concluded in its opinions of 1 February 2012 ([8]) and 6 May 2021 ([9]) that, under the proposed conditions of use, acetic acid, sodium diacetate and calcium acetate do not have an adverse effect on animal health, consumer safety or the environment. It also concluded that dilute acid is considered to be an irritant, while at higher concentrations it is corrosive and has a particular risk for the eyes. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additive. The Authority also concluded that acetic acid, sodium diacetate and calcium acetate are authorised food additives in the Union for use as preservatives. It is reasonable to expect that the effect in food will be observed in feed when they are used at comparable concentrations and under similar conditions.

(10) The Authority concluded in its opinion of 16 November 2011 ([10]) that, under the proposed conditions of use, propionic acid, sodium propionate, calcium propionate and ammonium propionate do not have an adverse effect on animal health, consumer safety or the environment. It also concluded that the propionic acid and sodium propionate, calcium propionate and ammonium propionate are corrosive to skin, mucous membranes and for eyes. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additives. The Authority also concluded that propionic acid, sodium propionate, calcium propionate and ammonium propionate have the potential to act as preservatives in feedingstuff.

([4]) EFSA Journal 2015;13(2):4009 and EFSA Journal 2015;13(2):4010.
([5]) Commission Regulation (EC) No 429/2008 of 25 April 2008 on detailed rules for the implementation of Regulation (EC) No 1831/2003 of the European Parliament and of the Council as regards the preparation and the presentation of applications and the assessment and the authorisation of feed additives (OJ L 133, 22.5.2008, p. 57).
([6]) EFSA Journal 2014;12(7):3792.
([7]) EFSA Journal 2015;13(9):4239.
([8]) EFSA Journal 2012;10(2):2571.
([9]) EFSA Journal 2021;19(5):6615.
([10]) EFSA Journal 2011;9(12):2446.

(11) The Authority concluded in its opinions of 17 September 2014 ([11]), 11 March 2015 ([12]), 18 March 2020 ([13]), 7 May 2020 ([14]), 19 March 2020 ([15]), 24 October 2014 ([16]) and 7 May 2020 ([17]) that, under the proposed conditions of use, formic acid, sodium formate, calcium formate and ammonium formate do not have an adverse effect on animal health, consumer safety or the environment. It also concluded that the formic acid, sodium formate, and ammonium formate are corrosive. Calcium formate and sodium formate are non-irritant to skin, but mildly irritant to eyes, and are respiratory irritant with a potential for sensitisation. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additives. The Authority also concluded formic acid, sodium formate, calcium formate and ammonium formate have the potential to act as preservatives in feed.

(12) The Authority concluded in its opinions of 9 July 2015 ([18]), 5 July 2017 ([19]) and 12 November 2019 ([20]) that, under the proposed conditions of use, lactic acid produced by *Bacillus coagulans* (LMG S-26145 or DSM 23965), *Bacillus smithii* (LMG S-27890) or *Bacillus subtilis* (LMG S-27889) and calcium lactate do not have an adverse effect on animal health, consumer safety or the environment. It also concluded that lactic acid is irritant to eyes, skin corrosive, and irritant for respiratory tract. Calcium lactate should be considered irritant to skin, eyes, and respiratory tract. Therefore, the Commission considers that appropriate protective measures should be taken to prevent adverse effects on human health, in particular as regards the users of the additives. The Authority also concluded that, since lactic acid and calcium lactate are used in food as preservatives, it is reasonable to expect that the effect seen in food will be observed in feed when these additives are used at comparable concentrations and under similar conditions.

(13) The Authority does not consider that there is a need for specific requirements of post-market monitoring. It also verified the reports on the methods of analysis of the feed additives in feed submitted by the Reference Laboratory set up by Regulation (EC) No 1831/2003.

(14) The assessments of DL-malic acid, citric acid produced by *Aspergillus niger* DSM 25794 or CGMCC 4513/CGMCC 5751 or CICC 40347/CGMCC 5343, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid produced by produced by *Bacillus coagulans* (LMG S-26145 or DSM 23965), *Bacillus smithii* (LMG S-27890) or *Bacillus subtilis* (LMG S-27889) and calcium lactate show that the conditions for authorisation, as provided for in Article 5 of Regulation (EC) No 1831/2003, are satisfied. Accordingly, the use of DL-malic acid, citric acid, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid and calcium lactate should be authorised.

(15) Since safety reasons do not require the immediate application of the modifications to the conditions of authorisation of DL-malic acid, citric acid, sorbic acid and potassium sorbate, acetic acid, sodium diacetate and calcium acetate, propionic acid, sodium propionate, calcium propionate and ammonium propionate, formic acid, sodium formate, calcium formate and ammonium formate, and lactic acid and calcium lactate, it is appropriate to allow a transitional period for interested parties to prepare themselves to meet the new requirements resulting from the authorisation.

(16) The fact that citric acid, sorbic acid and potassium sorbate, acetic acid, propionic acid, sodium propionate, ammonium propionate, formic acid, ammonium formate, sodium formate, calcium formate and lactic acid are not authorised for use as preservatives in water for drinking as well as citric acid as acidity regulator does not preclude their use in compound feed, which is administered via water.

([11]) EFSA Journal 2014;12(10):3827.
([12]) EFSA Journal 2015;13(5):4056.
([13]) EFSA Journal 2020;18(4):6076.
([14]) EFSA Journal 2020;18(5):6139.
([15]) EFSA Journal 2020;18(4):6077.
([16]) EFSA Journal 2014;12(11):3898.
([17]) EFSA Journal 2020;18(5):6137.
([18]) EFSA Journal 2015;13(12):4198.
([19]) EFSA Journal 2017;15(7):4938.
([20]) EFSA Journal 2019;17(12):5914.

(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

Authorisation

The additives specified in the Annex, belonging to the additive category 'technological additives' and to the functional group 'preservatives' or 'acidity regulators', are authorised as additives in animal nutrition, subject to the conditions laid down in that Annex.

Article 2

Transitional measures

1. The additives specified in the Annex and premixtures containing the additives, which are produced and labelled before 3 October 2022 in accordance with the rules applicable before 3 April 2022 may continue to be placed on the market and used until the existing stocks are exhausted.

2. Compound feed and feed materials containing the additives as specified in the Annex which are produced and labelled before 3 April 2023 in accordance with the rules applicable before 3 April 2022 may continue to be placed on the market and used until the existing stocks are exhausted if they are intended for food-producing animals.

3. Compound feed and feed materials containing the additives as specified in the Annex which are produced and labelled before 3 April 2024 in accordance with the rules applicable before 3 April 2022 may continue to be placed on the market and used until the existing stocks are exhausted if they are intended for non-food-producing animals.

Article 3

Entry into force

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, 11 March 2022.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a296	DL-Malic acid	*Additive composition* DL-Malic acid ≥ 99,5 % *Characterisation of the active substance* DL-Malic acid ≥ 99,5 % $C_4H_6O_5$ CAS No 6915-15-7 (or 617-48-1) Sulphated ash ≤ 0,02 % Fumaric acid ≤ 1 % Maleic acid ≤ 0,05 % Produced by chemical synthesis *Analytical method* (1) For the determination of malic acid as total malic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	-	1. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment, including skin, eye and breathing protections. 2. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a330	Citric acid	*Additive composition* Citric acid ≥ 99,5 % (in dry matter) *Characterisation of the active substance* Citric acid ≥ 99,5 % Anhydrous form: $C_6H_8O_7$ CAS No 77-92-9 Monohydrate form: $C_6H_8O_7.H_2O$ CAS No 5949-29-1 sulphated ash < 0,05 % oxalic acid < 100 mg/kg Produced by: — *Aspergillus niger* DSM 25794 or — *Aspergillus niger* CGMCC 4513/CGMCC 5751 or — *Aspergillus niger* CICC 40347/CGMCC 5343 *Analytical method* (1) For the determination of citric acid as total citric acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	15 000	1. The mixture of different sources of citric acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3 Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: acidity regulators**								
1a330	Citric acid	*Additive composition* Citric acid ≥ 99,5 % (in dry matter) *Characterisation of the active substance* Citric acid ≥ 99,5 % Anhydrous form: $C_6H_8O_7$ CAS No 77-92-9 Monohydrate form: $C_6H_8O_7.H_2O$ CAS No 5949-29-1 sulphated ash < 0,05 % oxalic acid < 100 mg/kg Produced by: — *Aspergillus niger* DSM 25794 or — *Aspergillus niger* CGMCC 4513/CGMCC 5751 or — *Aspergillus niger* CICC 40347/CGMCC 5343 *Analytical method* (1) For the determination of citric acid as total citric acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	15 000	1. The mixture of different sources of citric acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives.**								
1a200	Sorbic acid	*Additive composition* Sorbic acid ≥ 99 % Solid form *Active substance* Sorbic acid ≥ 99 % $C_6 H_8O_2$ CAS No 110-44-1 Sulphated ash ≤ 0,2 % Aldehydes ≤ 0,1 % Produced by chemical synthesis *Analytical method* (1) For the determination of sorbic acid as total sorbic acid in the feed additive, premixtures and feedingstuffs: High Performance Liquid Chromatography with ultraviolet detection, HPLC-UV (EN 17298)	All animal species other than ruminants with a non-functional rumen	-	-	2 500	1. The mixture of different sources of sorbic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Ruminants with a non-functional rumen		-	6 700		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1k202	Potassium sorbate	*Additive composition* Potassium sorbate ≥ 99 % Solid form *Active substance* Potassium sorbate ≥ 99 % $C_6 H_7 KO_2$ CAS No 24634-61-5 Produced by chemical synthesis *Analytical method* (1) For the determination of potassium in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma-atomic emission spectrometry (ICP-AES) For the determination of potassium sorbate as total sorbic acid in the feed additive, premixtures and feedingstuffs: High Performance Liquid Chromatography with ultraviolet detection, HPLC-UV (EN 17298)	All animal species other than ruminants with a non-functional rumen	-	-	2 500 (as sorbic acid)	1. The mixture of different sources of potassium sorbate shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Ruminants with a non-functional rumen		-	6 700 (as sorbic acid)		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a260	Acetic acid	*Additive composition* Acetic acid ≥ 99,8 % Liquid form *Characterisation of the active substance* Acetic acid ≥ 99,8 % $C_2H_4O_2$ CAS No 64-19-7 Water ≤ 0,15 % Non volatile matter ≤ 30 mg/kg Formic acid and its salts and other oxidisable material ≤ 0,5 g/kg Produced by chemical synthesis including cellulose production (as a by-product) *Analytical method* (1) For the determination of acetic acid as total acetic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	Poultry Pigs Pets	-	-	2 500	1. The mixture of different sources of acetic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			All other animals species other than fish		-	-		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a262	Sodium diacetate	*Additive composition* Sodium diacetate ≥ 58 % Solid form *Characterisation of the active substance* Sodium diacetate (anhydrous and trihydrate) ≥ 58 % $NaC_4H_7O_4$ CAS No 126-96-5 Acetic acid ≥ 39 % Water ≤ 2 % Non volatile matter ≤ 30 mg/kg Formic acid and its salts and other oxidisable material ≤ 1g/kg Produced by chemical synthesis *Analytical method* (1) For the determination of sodium in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma-atomic emission spectrometry (ICP-AES) For the determination of sodium diacetate as total acetic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	Poultry Pigs Pets	-	-	2 500 (as acetic acid)	1. The mixture of different sources of acetic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			All other animals species other than fish		-	-		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a263	Calcium acetate (anhydrous and monohydrate)	*Additive composition* Calcium acetate ≥ 98,7 % Solid form *Characterisation of the active substance* Calcium acetate ≥ 98,7 % $C_4H_6CaO_4$ CAS No 62-54-4 Water ≤ 6 % Non volatile matter ≤ 30 mg/kg Formic acid and its salts and other oxidisable material ≤ 1g/kg Iron ≤ 0,5 mg/kg Produced by chemical synthesis *Analytical method* (1) For the determination of calcium in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma-atomic emission spectrometry (ICP-AES) For the determination of calcium acetate as total acetic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	Poultry Pigs Pets	-	-	2 500 (as acetic acid)	1. The mixture of different sources of acetic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			All other animals species other than fish		-	-		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1k280	Propionic acid	*Additive composition* Propionic acid ≥ 99,5 % Liquid form *Characterisation of the active substance* Propionic acid ≥ 99,5 % $C_3H_6O_2$ CAS No 79-09-4 Non-volatile residue ≤ 0,01 % when dried at 140°C to constant weight Aldehydes ≤ 0,1 % expressed as propionaldehyde Produced by chemical synthesis *Analytical method* (1) For the quantification of propionic acid as total propionic acid in feed additive, premixtures, feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and poultry	-	-	-	1. The mixture of different sources of propionic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content'	3 April 2032
			Pigs		-	30 000		
			Poultry		-	10 000		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1k281	Sodium propionate	*Additive composition* Sodium propionate ≥ 98,5 % Solid form *Characterisation of the active substance* Sodium propionate ≥ 98,5 % $C_3H_5O_2Na$ CAS No 137-40-6 Loss on drying ≤ 4 % determined by drying for two hours at 105°C Produced by chemical synthesis *Analytical method* (1) For the determination of sodium in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma atomic emission spectrometry (ICP-AES) For the quantification of sodium propionate as total propionic acid in feed additive, premixtures, feedingstuffs Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and poultry	-	-	-	1. The mixture of different sources of propionic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Pigs		-	30 000 (as propionic acid)		
			Poultry		-	10 000 (as propionic acid)		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a282	Calcium propionate	*Additive composition* Calcium propionate ≥ 98 % on dry matter basis Solid form *Characterisation of the active substance* Calcium propionate ≥ 98 % $C_6H_{10}O_4Ca$ CAS No 4075-81-4 Loss on drying ≤ 6 % determined by drying for two hours at 105°C Produced by chemical synthesis *Analytical method* (1) For the determination of calcium in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma-atomic emission spectrometry (ICP-AES) For the quantification of calcium propionate as total propionic acid in feed additive, premixtures, feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and poultry	-	-	-	1. The mixture of different sources of propionic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Pigs		-	30 000 (as propionic acid)		
			Poultry		-	10 000 (as propionic acid)		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1k284	Ammonium propionate	*Additive composition* Preparation of ammonium propionate ≥ 19 %, propionic acid ≤ 80 %; water ≤ 30 % Liquid form *Characterisation of the active substance* Ammonium propionate $C_3H_9O_2N$ CAS No 17496-08-1 Produced by chemical synthesis *Analytical method* (1) For the determination of ammonium in the feed additive: ISO 5664: distillation and titration For the determination of ammonium propionate as total propionic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and poultry	-	-	-	1. The mixture of different sources of propionic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Pigs		-	30 000 (as propionic acid)		
			Poultry		-	10 000 (as propionic acid)		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives.**								
1k236	Formic acid	*Additive composition* Formic acid ≥ 84,5 % Liquid form *Characterisation of the active substance* Formic acid ≥ 84,5 % H_2CO_2 CAS No 64-18-6 Produced by chemical synthesis *Analytical method* (1) For the determination of formic acid in feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	10 000	1. The mixture of different sources of formic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives.**								
1k237i	Sodium formate	*Additive composition* Sodium formate ≥ 98 % Solid form Sodium formate ≥ 15 % Formic acid ≤ 75 % Water ≤ 25 % Liquid form *Characterisation of the active substance* Sodium formate HCO_2Na CAS No 141-53-7 Produced by chemical synthesis *Analytical method* (1) For the determination of sodium in the feed additives: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma atomic emission spectrometry (ICP-AES) For the determination of sodium formate as total formic acid in the feed additives, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	10 000 (as formic acid)	1. The mixture of different sources of formic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives.**								
1a238	Calcium formate	*Additive composition* Calcium formate ≥ 98 % Solid form *Characterisation of the active substance* Calcium formate $Ca(HCO)_2$ CAS No 544-17-2 Produced by chemical synthesis *Analytical method* (1) For the determination of calcium in the feed additive: EN ISO 6869: atomic absorption spectrometry (AAS) or EN 15510: inductively coupled plasma atomic emission spectrometry (ICP-AES) For the determination of calcium formate as total formic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species	-	-	10 000 (as formic acid)	1. The mixture of different sources of formic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg of additive/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives.**								
1a295	Ammonium formate	*Additive composition* Ammonium formate ≥ 35 % Formic acid ≤ 64 % Liquid form *Characterisation of the active substance* Ammonium formate ≥ 35 % HCO_2NH_4 CAS No 540-69-2 Formamide < 3 000 mg/kg Produced by chemical synthesis *Analytical method* (1) Determination of ammonium in the feed additive: ISO 5664: distillation and titration For the determination of ammonium formate as total formic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than laying hens, sows, dairy ruminants, pet and non-food producing animals	-	-	2 000 (as formic acid)	1. The mixture of different sources of formic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports

Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a270	Lactic acid	*Additive composition* Lactic acid ≥ 72 % (w/w) Liquid form *Characterisation of the active substance* Lactic acid: D-lactic acid ≤ 5 % L-lactic acid ≥ 95 % $C_3H_6O_3$ CAS No 79-33-4 Produced by fermentation of: *Bacillus coagulans* (LMG S-26145 or DSM 23965), or *Bacillus smithii* (LMG S-27890) or *Bacillus subtilis* (LMG S-27889). *Analytical method* (1) For the determination of lactic acid as total lactic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and ruminants with a functional rumen	-	-	20 000	1. The mixture of different sources of lactic acid shall not exceed the permitted maximum levels in complete feedingstuffs for related species. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Pigs and ruminants other than ruminants with a non functional rumen		-	50 000		

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Identification number of the additive	Additive	Composition, chemical formula, description, analytical method	Species or category of animal	Maximum age	Minimum content	Maximum content	Other provisions	End of period of authorisation
					mg/kg of complete feedingstuff with a moisture content of 12 %			
Category: technological additives **Functional group: preservatives**								
1a327	Calcium lactate	*Additive composition* Calcium lactate ≥ 98 % (as dry matter w/w) Solid form *Characterisation of the active substance* Calcium lactate ≥ 98 % $(C_3H_5O_2)_2 \cdot nH_2O$ CAS No 814-80-2 Produced by chemical synthesis *Analytical method* (1) For the determination of calcium lactate in the feed additive: — EN ISO 6869: atomic absorption spectrometry (AAS) or — EN 15510: inductively coupled plasma-atomic emission spectrometry (ICP-AES) For the determination of calcium lactate as total lactic acid in the feed additive, premixtures and feedingstuffs: Ion Chromatography with Conductivity Detection, IC-CD (EN 17294)	All animal species other than pigs and ruminants with a functional rumen	-	-	20 000 (as lactic acid)	1. The mixture of different sources of lactic acid shall not exceed the permitted maximum levels in complete feedingstuffs. 2. For users of the additive and premixtures, feed business operators shall establish operational procedures and appropriate organisational measures to address the potential risks resulting from its use. Where those risks cannot be eliminated or reduced to a minimum by such procedures and measures, the additive and premixtures shall be used with personal protective equipment including skin, eye and breathing protections. 3. Indicate in the instructions for use of the additive, premixture and related feedingstuffs for food-producing animals: 'The simultaneous use of different organic acids or their salts is contraindicated where one or more of them is used at or near the maximum permitted content.'	3 April 2032
			Pigs and ruminants other than ruminants with a non functional rumen		-	30 000 (as lactic acid)		

(1) Details of the analytical methods are available at the following address of the Reference Laboratory: https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports