

Commission Regulation (EU) 2020/749 of 4 June 2020 amending
Annex III to Regulation (EC) No 396/2005 of the European
Parliament and of the Council as regards maximum residue levels
for chlorate in or on certain products (Text with EEA relevance)

COMMISSION REGULATION (EU) 2020/749

of 4 June 2020

amending Annex III to Regulation (EC) No 396/2005 of
the European Parliament and of the Council as regards
maximum residue levels for chlorate in or on certain products

(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 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC⁽¹⁾, and in particular Article 14(1)(a) and Article 16(1)(a) thereof,

Whereas:

- (1) According to Commission Decision 2008/865/EC⁽²⁾ all authorisations for plant protection products containing chlorate have been revoked following the non-inclusion of chlorate in Annex I to Council Directive 91/414/EEC⁽³⁾.
- (2) No specific maximum residue levels (MRLs) have been set for chlorate and, as this substance has not been included in Annex IV to Regulation (EC) No 396/2005, currently the default MRL of 0,01 mg/kg applies to all food and feed commodities included in Annex I to Regulation (EC) No 396/2005.
- (3) Apart from its former use in plant protection products, chlorate is also a substance that is formed as by-product resulting from the use of chlorine disinfectants in food and drinking water processing. These uses lead to the current situation of detectable residues of chlorate in food.
- (4) The European Food Safety Authority ('the Authority') collected between 2014 and 2018 monitoring data to investigate the presence of residues of chlorate in food and drinking water. Those data indicated that chlorate residues are present at levels that frequently exceed the default MRL of 0,01 mg/kg and that the levels vary depending on the source and the product. It follows from those findings that even if good practices are used, it is currently not possible to achieve levels of chlorate residues compliant with the current MRL of 0,01 mg/kg.
- (5) The Authority adopted a scientific opinion concerning the risks for public health related to the presence of chlorate in food⁽⁴⁾. In that opinion the Authority established a tolerable

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daily intake (TDI) of 3 µg/kg body weight per day and an acute reference dose (ARfD) of 36 µg/kg body weight. The Authority concluded that based on the data collected in 2014 the acute dietary exposure to chlorate did not exceed the ARfD. The mean dietary exposures to chlorate in European countries exceeded the TDI in certain subgroups of the population such as infants and young children with mild to moderate iodine deficiency.

- (6) In order to bring chlorate levels down and reduce exposure through coordinated action in several relevant and related sectors, a multi-disciplinary action plan was agreed by the Member States in 2017 comprising a set of actions to be taken in parallel, including actions on drinking water, hygiene, and the setting of temporary maximum residue levels for food and feed.
- (7) This Regulation addresses the setting of temporary maximum levels in food. For this purpose a large number of occurrence data was collected between 2014 and 2018, both by Member States and by food business operators. The data shows a general trend towards decreasing levels, suggesting that manufacturing practices have already improved to a certain extent. In the specific case of chlorate, for which residues do not stem from pesticide use but result from use of chlorine-based solutions in food processing and drinking water treatment, maximum levels should be set at levels which are ‘as low as reasonably achievable’ (ALARA principle) by following good manufacturing practices while ensuring at the same time that good hygiene practices remain possible. This approach ensures that food business operators apply measures to prevent and reduce the chlorate levels in food as far as possible in order to protect public health, but also take into account the need for microbiological safety of food.
- (8) Temporary MRLs for chlorate according to the ALARA principle are based on the 95th percentile of the occurrence data, taking into account the use of legitimately treated drinking water in food processing. The temporary MRLs should be reviewed at the latest within five years of publication of this Regulation in the light of possible developments in the area of hygiene, of drinking water, further progress made by food business operators to bring chlorate levels down, or whenever new information and data become available that would warrant an earlier review.
- (9) The Commission consulted the European Union reference laboratories on appropriate limits of determination (LODs) for chlorate residues in certain specific commodities.
- (10) Based on the scientific opinion of the Authority and taking into account the factors relevant to the matter under consideration, the proposed MRLs fulfil the requirements of Article 14(2) of Regulation (EC) No 396/2005.
- (11) Regulation (EC) No 396/2005 should therefore be amended accordingly.
- (12) 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:

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Article 1

Annex III to Regulation (EC) No 396/2005 is amended in accordance with the Annex to this Regulation.

Article 2

The temporary MRLs for chlorate shall be reviewed not later than 8 June 2025.

Article 3

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 June 2020.

For the Commission

The President

Ursula VON DER LEYEN

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ANNEX

In Part A of Annex III to Regulation (EC) No 396/2005 the following column for chlorate is added:

‘Pesticide residues and maximum residue levels (mg/kg)

Code number	Groups and examples of individual products to which the MRLs apply (a)	Chlorate (A)
(1)	(2)	(3)
0100000	FRUITS, FRESH or FROZEN; TREE NUTS	
0110000	Citrus fruits	0,05
0110010	Grapefruits	
0110020	Oranges	
0110030	Lemons	
0110040	Limes	
0110050	Mandarins	
0110990	Others (2)	
0120000	Tree nuts	0,1
0120010	Almonds	
0120020	Brazil nuts	
0120030	Cashew nuts	
0120040	Chestnuts	
0120050	Coconuts	
0120060	Hazelnuts/cobnuts	
0120070	Macadamias	
0120080	Pecans	
0120090	Pine nut kernels	
0120100	Pistachios	
0120110	Walnuts	
0120990	Others (2)	
0130000	Pome fruits	0,05
0130010	Apples	
0130020	Pears	
0130030	Quinces	
0130040	Medlars	

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0130050		Loquats/Japanese medlars	
0130990		Others (2)	
0140000		Stone fruits	0,05
0140010		Apricots	
0140020		Cherries (sweet)	
0140030		Peaches	
0140040		Plums	
0140990		Others (2)	
0150000		Berries and small fruits	0,05
0151000	(a)	grapes	
0151010		Table grapes	
0151020		Wine grapes	
0152000	(b)	strawberries	
0153000	(c)	cane fruits	
0153010		Blackberries	
0153020		Dewberries	
0153030		Raspberries (red and yellow)	
0153990		Others (2)	
0154000	(d)	other small fruits and berries	
0154010		Blueberries	
0154020		Cranberries	
0154030		Currants (black, red and white)	
0154040		Gooseberries (green, red and yellow)	
0154050		Rose hips	
0154060		Mulberries (black and white)	
0154070		Azaroles/ Mediterranean medlars	
0154080		Elderberries	
0154990		Others (2)	

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0160000		Miscellaneous fruitswith	
0161000	(a)	edible peel	
0161010		Dates	0,3
0161020		Figs	0,3
0161030		Table olives	0,7
0161040		Kumquats	0,3
0161050		Carambolas	0,3
0161060		Kaki/Japanese persimmons	0,3
0161070		Jambuls/jambolans	0,3
0161990		Others (2)	0,3
0162000	(b)	inedible peel, small	0,3
0162010		Kiwi fruits (green, red, yellow)	
0162020		Litchis/lychees	
0162030		Passionfruits/ maracujas	
0162040		Prickly pears/cactus fruits	
0162050		Star apples/cainitos	
0162060		American persimmons/ Virginia kaki	
0162990		Others (2)	
0163000	(c)	inedible peel, large	0,3
0163010		Avocados	
0163020		Bananas	
0163030		Mangoes	
0163040		Papayas	
0163050		Granate apples/ pomegranates	
0163060		Cherimoyas	
0163070		Guavas	
0163080		Pineapples	
0163090		Breadfruits	
0163100		Durians	

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0163110		Soursops/ guanabanas	
0163990		Others (2)	
0200000		VEGETABLES, FRESH or FROZEN	
0210000		Root and tuber vegetables	
0211000	(a)	potatoes	0,05
0212000	(b)	tropical root and tuber vegetables	0,05
0212010		Cassava roots/ manioc	
0212020		Sweet potatoes	
0212030		Yams	
0212040		Arrowroots	
0212990		Others (2)	
0213000	(c)	other root and tuber vegetables except sugar beets	0,15
0213010		Beetroots	
0213020		Carrots	
0213030		Celeriacs/turnip rooted celeries	
0213040		Horseradishes	
0213050		Jerusalem artichokes	
0213060		Parsnips	
0213070		Parsley roots/ Hamburg roots parsley	
0213080		Radishes	
0213090		Salsifies	
0213100		Swedes/rutabagas	
0213110		Turnips	
0213990		Others (2)	
0220000		Bulb vegetables	
0220010		Garlic	0,7

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0220020		Onions	0,5
0220030		Shallots	0,5
0220040		Spring onions/green onions and Welsh onions	0,5
0220990		Others (2)	0,05
0230000		Fruiting vegetables	
0231000	(a)	Solanaceae and Malvaceae	
0231010		Tomatoes	0,1
0231020		Sweet peppers/bell peppers	0,3
0231030		Aubergines/eggplants	0,4
0231040		Okra/lady's fingers	0,1
0231990		Others (2)	0,1
0232000	(b)	cucurbits with edible peel	0,2
0232010		Cucumbers	
0232020		Gherkins	
0232030		Courgettes	
0232990		Others (2)	
0233000	(c)	cucurbits with inedible peel	0,08
0233010		Melons	
0233020		Pumpkins	
0233030		Watermelons	
0233990		Others (2)	
0234000	(d)	sweet corn	0,1
0239000	(e)	other fruiting vegetables	0,1
0240000		Brassica vegetables(excluding brassica roots and brassica baby leaf crops)	
0241000	(a)	flowering brassica	
0241010		Broccoli	0,4

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0241020		Cauliflowers	0,06
0241990		Others (2)	0,06
0242000	(b)	head brassica	0,07
0242010		Brussels sprouts	
0242020		Head cabbages	
0242990		Others (2)	
0243000	(c)	leafy brassica	
0243010		Chinese cabbages/ pe-tsai	0,06
0243020		Kales	0,2
0243990		Others (2)	0,06
0244000	(d)	kohlrabies	0,06
0250000		Leaf vegetables, herbs and edible flowers	0,7
0251000	(a)	lettuces and salad plants	
0251010		Lamb's lettuces/ corn salads	
0251020		Lettuces	
0251030		Escaroles/broad- leaved endives	
0251040		Cresses and other sprouts and shoots	
0251050		Land cresses	
0251060		Roman rocket/ rucola	
0251070		Red mustards	
0251080		Baby leaf crops (including brassica species)	
0251990		Others (2)	
0252000	(b)	spinaches and similar leaves	
0252010		Spinaches	
0252020		Purslanes	
0252030		Chards/beet leaves	
0252990		Others (2)	

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0253000	(c)	grape leaves and similar species	
0254000	(d)	watercresses	
0255000	(e)	witloofs/Belgian endives	
0256000	(f)	herbs and edible flowers	
0256010		Chervil	
0256020		Chives	
0256030		Celery leaves	
0256040		Parsley	
0256050		Sage	
0256060		Rosemary	
0256070		Thyme	
0256080		Basil and edible flowers	
0256090		Laurel/bay leaves	
0256100		Tarragon	
0256990		Others (2)	
0260000		Legume vegetables	0,35
0260010		Beans (with pods)	
0260020		Beans (without pods)	
0260030		Peas (with pods)	
0260040		Peas (without pods)	
0260050		Lentils	
0260990		Others (2)	
0270000		Stem vegetables	0,25
0270010		Asparagus	
0270020		Cardoons	
0270030		Celeries	
0270040		Florence fennels	
0270050		Globe artichokes	
0270060		Leeks	
0270070		Rhubarbs	
0270080		Bamboo shoots	

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0270090	Palm hearts	
0270990	Others (2)	
0280000	Fungi, mosses and lichens	
0280010	Cultivated fungi	0,7
0280020	Wild fungi	0,7
0280990	Mosses and lichens	0,05
0290000	Algae and prokaryotes organisms	0,05
0300000	PULSES	0,35
0300010	Beans	
0300020	Lentils	
0300030	Peas	
0300040	Lupins/lupini beans	
0300990	Others (2)	
0400000	OILSEEDS AND OIL FRUITS	
0401000	Oilseeds	0,05
0401010	Linseeds	
0401020	Peanuts/groundnuts	
0401030	Poppy seeds	
0401040	Sesame seeds	
0401050	Sunflower seeds	
0401060	Rapeseeds/canola seeds	
0401070	Soyabeans	
0401080	Mustard seeds	
0401090	Cotton seeds	
0401100	Pumpkin seeds	
0401110	Safflower seeds	
0401120	Borage seeds	
0401130	Gold of pleasure seeds	
0401140	Hemp seeds	
0401150	Castor beans	

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0401990	Others (2)	
0402000	Oil fruits	0,7
0402010	Olives for oil production	
0402020	Oil palms kernels	
0402030	Oil palms fruits	
0402040	Kapok	
0402990	Others (2)	
0500000	CEREALS	0,05
0500010	Barley	
0500020	Buckwheat and other pseudocereals	
0500030	Maize/corn	
0500040	Common millet/ proso millet	
0500050	Oat	
0500060	Rice	
0500070	Rye	
0500080	Sorghum	
0500090	Wheat	
0500990	Others (2)	
0600000	TEAS, COFFEE, HERBAL INFUSIONS, COCOA AND CAROBS	0,05
0610000	Teas	
0620000	Coffee beans	
0630000	Herbal infusions from	
0631000	(a) flowers	
0631010	Chamomile	
0631020	Hibiscus/roselle	
0631030	Rose	
0631040	Jasmine	
0631050	Lime/linden	
0631990	Others (2)	

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0632000	(b)	leaves and herbs	
0632010		Strawberry	
0632020		Rooibos	
0632030		Mate/maté	
0632990		Others (2)	
0633000	(c)	roots	
0633010		Valerian	
0633020		Ginseng	
0633990		Others (2)	
0639000	(d)	any other parts of the plant	
0640000		Cocoa beans	
0650000		Carobs/Saint John's breads	
0700000		HOPS	0,05
0800000		SPICES	
0810000		Seed spices	0,07
0810010		Anise/aniseed	
0810020		Black caraway/ black cumin	
0810030		Celery	
0810040		Coriander	
0810050		Cumin	
0810060		Dill	
0810070		Fennel	
0810080		Fenugreek	
0810090		Nutmeg	
0810990		Others (2)	
0820000		Fruit spices	0,07
0820010		Allspice/pimento	
0820020		Sichuan pepper	
0820030		Caraway	
0820040		Cardamom	
0820050		Juniper berry	

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0820060	Peppercorn (black, green and white)	
0820070	Vanilla	
0820080	Tamarind	
0820990	Others (2)	
0830000	Bark spices	0,07
0830010	Cinnamon	
0830990	Others (2)	
0840000	Root and rhizome spices	
0840010	Liquorice	0,07
0840020	Ginger (10)	
0840030	Turmeric/curcuma	0,07
0840040	Horseradish (11)	
0840990	Others (2)	0,07
0850000	Bud spices	0,07
0850010	Cloves	
0850020	Capers	
0850990	Others (2)	
0860000	Flower pistil spices	0,07
0860010	Saffron	
0860990	Others (2)	
0870000	Aril spices	0,07
0870010	Mace	
0870990	Others (2)	
0900000	SUGAR PLANTS	0,05
0900010	Sugar beet roots	
0900020	Sugar canes	
0900030	Chicory roots	
0900990	Others (2)	
1000000	PRODUCTS OF ANIMAL ORIGIN - TERRESTRIAL ANIMALS	
1010000	Commodities from	

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1011000	(a)	swine	
1011010		Muscle	0,05
1011020		Fat	0,1(*)
1011030		Liver	0,05
1011040		Kidney	0,05
1011050		Edible offals (other than liver and kidney)	0,05
1011990		Others (2)	0,05
1012000	(b)	bovine	
1012010		Muscle	0,05
1012020		Fat	0,1(*)
1012030		Liver	0,05
1012040		Kidney	0,05
1012050		Edible offals (other than liver and kidney)	0,05
1012990		Others (2)	0,05
1013000	(c)	sheep	
1013010		Muscle	0,05
1013020		Fat	0,1(*)
1013030		Liver	0,05
1013040		Kidney	0,05
1013050		Edible offals (other than liver and kidney)	0,05
1013990		Others (2)	0,05
1014000	d)	goat	
1014010		Muscle	0,05
1014020		Fat	0,1(*)
1014030		Liver	0,05
1014040		Kidney	0,05
1014050		Edible offals (other than liver and kidney)	0,05
1014990		Others (2)	0,05
1015000	(e)	equine	

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1015010		Muscle	0,05
1015020		Fat	0,1(*)
1015030		Liver	0,05
1015040		Kidney	0,05
1015050		Edible offals (other than liver and kidney)	0,05
1015990		Others (2)	0,05
1016000	(f)	poultry	
1016010		Muscle	0,05
1016020		Fat	0,1(*)
1016030		Liver	0,05
1016040		Kidney	0,05
1016050		Edible offals (other than liver and kidney)	0,05
1016990		Others (2)	0,05
1017000	(g)	other farmed terrestrial animals	
1017010		Muscle	0,05
1017020		Fat	0,1(*)
1017030		Liver	0,05
1017040		Kidney	0,05
1017050		Edible offals (other than liver and kidney)	0,05
1017990		Others (2)	0,05
1020000		Milk	0,1
1020010		Cattle	(+)
1020020		Sheep	(+)
1020030		Goat	(+)
1020040		Horse	(+)
1020990		Others (2)	
1030000		Birds eggs	0,05
1030010		Chicken	
1030020		Duck	
1030030		Geese	

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1030040	Quail	
1030990	Others (2)	
1040000	Honey and other apiculture products (7)	0,05(*)
1050000	Amphibians and Reptiles	0,05
1060000	Terrestrial invertebrate animals	0,05
1070000	Wild terrestrial vertebrate animals	0,05
1100000	PRODUCTS OF ANIMAL ORIGIN - FISH, FISHPRODUCTS AND ANY OTHER MARINE AND FRESHWATER FOOD PRODUCTS (8)	
1200000	PRODUCTS OR PART OF PRODUCTS EXCLUSIVELY USED FOR ANIMAL FEED PRODUCTION (8)	
1300000	PROCESSED FOOD PRODUCTS (9)	

(*) Limit of analytical determination

(a) For the complete list of products of plant and animal origin to which MRLs apply, reference should be made to Annex I.

Chlorate (A)

(A) To take into account the specific situation of chlorate residues, in processed food (including for the purpose of this Regulation foodstuffs that have been derived using processes listed in Article 2(1)(n) of Regulation (EC) No 852/2004), that has come in contact with products containing chlorate residues, or that contains ingredients with such residues, such as processing aids or drinking water, used in compliance with the respective legal requirements, these additional contributions of chlorate residues should be taken into account when determining the permitted content of chlorate residues in or on the processed food products in accordance with Article 20 (1) of this Regulation. The burden of proof regarding the level of those additional contributions lies with the food and feed business operator.

(+) Includes raw milk, heat-treated milk and milk for the manufacture of milk-based products as defined in Regulation (EU) No 1308/2013. The MRL applies to milk ready for use (marketed as such or reconstituted as instructed by the manufacturer)

1020010 Cattle

(+) Includes raw milk, heat-treated milk and milk for the manufacture of milk-based products. The MRL applies to milk ready for use (marketed as such or reconstituted as instructed by the manufacturer)

1020020 Sheep 1020030 Goat 1020040 Horse'

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- (1) [OJ L 70, 16.3.2005, p. 1.](#)
- (2) Commission Decision 2008/865/EC of 10 November 2008 concerning the non-inclusion of chlorate in Annex I to Council Directive 91/414/EEC and the withdrawal of authorisations for plant protection products containing that substance ([OJ L 307, 18.11.2008, p. 7.](#))
- (3) Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market ([OJ L 230, 19.8.1991, p. 1.](#))
- (4) EFSA (European Food Safety Authority), 2015. Scientific opinion on the risks for public health related to the presence of chlorate in food. *EFSA Journal* 2015;13(6):4135, 103 pp.

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Changes and effects yet to be applied to :

- Regulation revoked by [S.I. 2022/144 Sch.](#)