Maximum residue levels for dithiocarbamates

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EU proposes to amend MRLs for dithiocarbamates

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

Draft Annex

Update

The European Commission has informed the World Trade Organization Sanitary and Phytosanitary Measures (WTO SPS) Committee that it intends to amend the maximum residue levels (MRLs) for dithiocarbamates (G/SPS/N/EU/788). Revised MRLs are proposed for a wide range of products, and may particularly impact exporters of **apples, pears, quinces, medlars, and loquats** (reduction of MRL from 5 to 0.07 mg/kg), and **oil palms kernels/fruits** (reduction of MRL to the limit of determination, LOD). The LOD is the lowest level that can be detected using the most modern and reliable analytical methods.

The MRLs are set for the group of dithiocarbamates that includes maneb, mancozeb, metiram, propineb, thiram, and ziram.

Impacted products

Grapefruits, limes, oranges, lemons, mandarins, other citrus, almonds, pecans, Brazil nuts, cashews, chestnuts, coconuts, hazelnuts/cobnuts, macadamias, pine nut kernels, pistachios, walnuts, apples, pears, quinces, medlars, loquats/Japanese medlars, apricots, cherries (sweet), peaches, plums, table grapes, strawberries, blackberries, dewberries, raspberries, azaroles/Mediterranean medlars, blueberries, currants, gooseberries, rose hips, mulberries, elderberries, dates, kumquats, carambolas, jambuls/jambolans, lychees, prickly pears/cactus fruits, star apples/cainitos, figs, kiwi fruits, kaki/Japanese persimmons, American persimmons/Virginia kaki, table olives, passionfruits/maracujas, avocados, papayas, mangoes, granate apples/pomegranates, cherimoyas, guavas, breadfruits, durians, soursops/guanabanas, pineapples, potatoes, cassava roots/manioc, sweet potatoes, yams, arrowroots, beetroots, carrots, celeriacs/ turnip rooted celeries, horseradishes, Jerusalem artichokes, parsnips, parsley roots/Hamburg roots parsley, salsifies, swedes/rutabagas, turnips, garlic, onions, shallots, spring onions/ green onions and Welsh onions, tomatoes, sweet peppers/bell peppers, aubergines/eggplants, okra/ lady's fingers, gherkins, courgettes, melons, pumpkins, watermelons, sweet corn, broccoli, cauliflowers, Brussels sprouts, head cabbages, Chinese cabbages/ pe-tsai, kales, lamb's lettuces/corn salads, lettuces, escaroles/broad-leaved endives, purslanes, chervil, celery leaves, parsley, sage, rosemary, thyme, basil and edible flowers, laurel/bay leaves, tarragon, cresses and other sprouts and shoots, land cresses, red mustards, baby leaf crops (including Brassica species), Roman rocket/rucola, spinaches, chards/beet leaves, grape leaves and similar species, watercresses, witloofs/Belgian endives, chives, beans (with pods), peas (with pods), peas (without pods), lentils, asparagus, rhubarbs, cardoons, celeries, Florence fennels, globe artichokes, leeks, bamboo shoots, palm hearts, cultivated fungi, wild fungi, mosses and lichens, lentils, lupins/lupini beans, [seeds of: poppy, sesame, sunflower, pumpkin, safflower, borage, gold of pleasure, hemp, rape/canola, mustard, cotton], castor beans, soyabeans, olives for oil production, oil palm kernels & fruits, barley, maize/corn, buckwheat, pseudocereals, millet, oats, rice, rye, sorghum, hops, kapok, teas, coffee beans, cocoa, carobs/St John's breads, chamomile, hibiscus, rose, jasmine, lime/linden, strawberry, rooibos, valerian, maté, aniseed, black caraway, celery, coriander, dill, fennel, fenugreek, nutmeg, allspice/pimento, Sichuan pepper, caraway, cardamom, juniper berry, peppercorns, vanilla, tamarind, turmeric, cloves, saffron, mace, cumin, cinnamon, liquorice, capers, sugar beet roots, sugar canes, chicory roots, swine, cattle, sheep, goat, horse, and poultry muscle, fat, liver, kidney, edible offals (other than liver and kidney), milk (cattle, sheep, goat, horse), bird eggs (chicken, duck, geese, quail)

What is changing?

The EU proposes to amend the MRLs for dithiocarbamates as summarised in Table 1.

Why?

The European Union has conducted a comprehensive review of the MRLs for dithiocarbamates as part of its regular review of MRLs.

Several pesticides belong to the dithiocarbamates group, including maneb, mancozeb, metiram, propineb, thiram, and ziram. The analytical method used to quantify the presence of these substances is based on their conversion into carbon disulphide (CS2), so a single MRL is established for the group (although a specific MRL also exists for thiram, see Maximum residue levels for thiram).

The European Food Safety Authority (EFSA 2023) has reviewed the MRLs for dithiocarbamates. For products where Codex MRLs (CXLs) or import tolerances exist and are considered safe, the European Commission proposes to adjust the MRLs accordingly. CS2 can occur naturally in some plants. In some cases, EFSA used monitoring data from organic products to identify the natural CS2 content in certain plants, which is unrelated to (and should not be confused with) the use of pesticides.

The Commission proposes to set the MRLs at the specific LODs for products where the use of plant protection products containing the active substances for dithiocarbamates is not authorised, if no import tolerances or CXLs exist.

As limited data was available for certain products, further evaluations and potential adjustments are planned within 2 years.

Timeline

The new MRLs will apply from approximately **August 2025** – the precise date will be known once the Regulation is published.

Products (except pome fruits, table grapes, mangoes, apricots, peaches, strawberries, currants, papayas, and potatoes) exported before August 2025 that comply with the old MRLs will not be removed from the EU market after August 2025, even if they do not comply with the new MRLs.

Recommended Actions

Suppliers of all products should review their current use of dithiocarbamates (maneb, mancozeb, metiram, propineb, thiram, and ziram) and residue levels. Suppliers of **apples, pears, quinces, medlars and loquats, nuts, and oil palm kernels/fruits** in particular should evaluate their current use of these substances and explore possible alternative solutions in anticipation of these MRL changes.

Authorities in countries that are members of the WTO can provide feedback on the EU's proposal (G/SPS/N/EU/788) by emailing the EU SPS Enquiry Point until **20 September 2024**.

Background

MRLs are set in accordance with the rules set out in Regulation 396/2005. For information on current MRLs for other substances, please consult the EU Pesticide Residues database.

Resources

EFSA (2023) Review of the existing maximum residue levels for dithiocarbamates according to Article 12 of Regulation (EC) No 396/2005. EFSA Journal, 21(5): 7987.

Sources

Draft Commission Regulation as regards maximum residue levels for dithiocarbamates in or on certain products

Draft Annex

Table & Figures

Table 1
Changes to maximum residue levels for dithiocarbamates

Food category	Products	Dithiocarbamates (mg/kg)	
		Old MRL	New MRL
Citrus fruits	Grapefruits, limes	5	0.4
	Oranges	5	2
	Lemons	5	0.1
	Mandarins	5	10
	Other citrus	5	0.01*
Tree nuts	Almonds, pecans	0.05	0.1
	Brazil nuts, cashew nuts, chestnuts, coconuts, hazelnuts/cobnuts, macadamias, pine nut kernels, pistachios	0.05	0.01*
	Walnuts	0.1	0.01*
Pome fruits	Apples, pears, quinces, medlars, loquats/Japanese medlars	5	0.07
Stone fruits	Apricots	2	0.5
	Cherries (sweet)	2	6
	Peaches	2	0.1
	Plums	2	0.9
Berries and small fruits	Table grapes	5	2
	Strawberries	10	0.1
	Blackberries, dewberries, raspberries (red and yellow), azaroles/Mediterranean medlars	0.05*	0.1
	Blueberries, currants (black, red, white), gooseberries (green, red, yellow)	5	2
	Rose hips, mulberries (black and white), elderberries	0.05*	2
Miscellaneous fruit	Dates, carambolas, jambuls/jambolans, litchis/lychees, prickly pears/cactus fruits, star apples/cainitos	0.05*	0.01*
	Kaki/Japanese persimmons	0.2	0.1
	Figs, kiwi fruits (green, red, yellow), American persimmons/Virginia kaki	0.05*	0.1
	Table olives	5	0.2
	Kumquats	0.05*	0.4
	Passionfruits/maracujas	0.05*	1.5
	Avocados, papayas	7	0.1
	Mangoes	2	0.6
	Granate apples/pomegranates, cherimoyas, guavas, breadfruits, durians, soursops/guanabanas	0.05*	0.01*
	Pineapples	0.05*	1.5
Root and tuber vegetables	Potatoes	0.3	0.1
	Cassava roots/manioc, sweet potatoes, yams, arrowroots	0.05*	0.1
	Beetroots	0.5	0.4
	Carrots	0.2	1
	Celeriacs/turnip rooted celeries	0.3	0.1
	Horseradishes	0.2	50
	Jerusalem artichokes	0.05*	0.1
	Parsnips, parsley roots/Hamburg roots parsley, salsifies	0.2	0.1
	Swedes/rutabagas	0.05*	1
	Turnips	0.05*	4

* Limit of determination.

Continued…

Table 1
Continued

Food category	Products	Dithiocarbamates (mg/kg)	
		Old MRL	New MRL
Bulb vegetables	Garlic	0.6	0.5
	Onions	1	0.5
	Shallots, spring onions/green onions and Welsh onions	1	0.7
Fruiting vegetables	Tomatoes	3	2
	Sweet peppers/bell peppers	5	1
	Aubergines/eggplants	3	1.5
	Okra/lady's fingers	0.5	0.1
	Gherkins	2	0.4
	Courgettes	2	1
	Melons	1.5	0.5
	Pumpkins	1.5	0.4
	Watermelons	1.5	1
	Sweet corn	0.05*	0.1
Brassica vegetables	Broccoli, cauliflowers	1	1.5
	Brussels sprouts	2	1
	Head cabbages	3	0.4
	Chinese cabbages/pe-tsai, kales	0.5	1
Leaf vegetables, herbs and edible flowers	Lamb's lettuces/corn salads, lettuces, escaroles/broad-leaved endives, purslanes, chervil, celery leaves, parsley, sage, rosemary, thyme, basil and edible flowers, laurel/bay leaves, tarragon	5	0.1
	Cresses and other sprouts and shoots	5	30
	Land cresses, red mustards, baby leaf crops (including Brassica species)	5	1
	Roman rocket/rucola	5	14
	Spinaches, chards/beet leaves, grape leaves and similar species	0.05*	0.1
	Watercresses	0.3	1
	Witloofs/Belgian endives	0.5	0.1
	Chives	5	0.7
Legume vegetables	Beans (with pods)	1	2
	Peas (with pods)	1	3
	Peas (without pods)	0.2	0.1
	Lentils	0.05*	0.1
Stem vegetables	Asparagus, rhubarbs	0.5	0.1
	Cardoons, celeries, Florence fennels, globe artichokes	0.05*	0.1
	Leeks	3	0.5
	Bamboo shoots, palm hearts	0.05	0.01*
Fungi, mosses and lichens	Cultivated fungi, wild fungi	0.05*	0.1
	Mosses and lichens	0.05*	0.01*
Pulses	Lentils, lupins/lupini beans	0.05*	0.1

* Limit of determination.

Continued…

Table 1
Continued

Food category	Products	Dithiocarbamates (mg/kg)	
		Old MRL	New MRL
Oilseeds	Poppy seeds, sesame seeds, sunflower seeds, pumpkin seeds, safflower seeds, borage seeds, gold of pleasure seeds, hemp seeds, castor beans	0.1	0.05
	Rapeseeds/canola seeds	0.5	1
	Soyabeans	0.1	0.3
	Mustard seeds	0.1	1
	Cotton seeds	0.1	0.4
Oil fruits	Olives for oil production	5	0.2
	Oil palm kernels, oil palm fruits, kapok	0.1	0.01*
Cereals	Barley	2	1
	Maize/corn	0.05*	0.15
	Buckwheat and other pseudocereals, common millet/proso millet	0.05*	0.1
	Oats	2	0.1
	Rice	0.05*	3
	Rye	1	0.1
	Sorghum	0.05*	0.1
Teas		0.1*	0.05*
Coffee beans		0.1*	0.05*
Herbal infusions	Chamomile, hibiscus/roselle, rose, jasmine, lime/linden, strawberry, rooibos, valerian	0.1*	0.3
	Maté	0.1*	6
Cocoa beans, carobs/ Saint John's breads		0.1*	0.05*
Hops		25	30
Spices	Anise/aniseed, black caraway/black cumin, celery, coriander, dill, fennel, fenugreek, nutmeg, allspice/pimento, Sichuan pepper, caraway, cardamom, juniper berry, peppercorn (black, green, white), vanilla, tamarind, turmeric/curcuma, cloves, saffron, mace	0.1*	0.3
	Cumin	0.1*	10
	Cinnamon, liquorice	0.1*	0.05*
	Capers	25	0.05*
Sugar plants	Sugar beet roots	2	0.5
	Sugar canes	0.05*	0.01*
	Chicory roots	0.05*	0.1
Products of animal origin	Swine, cattle, sheep, goat, horse, and poultry muscle, fat, liver, kidney, edible offals (other than liver and kidney)	0.05*	0.02*
	Milk (cattle, sheep, goat, horse)	0.05*	0.02*
	Bird eggs (chicken, duck, geese, quail)	0.05*	0.02*

* Limit of determination.

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Source: Draft Annex