



**THAI AGRICULTURAL STANDARD**

**TAS 9002-2013**

**PESTICIDE RESIDUES : MAXIMUM RESIDUE LIMITS**

**National Bureau of Agricultural Commodity and Food Standards  
Ministry of Agriculture and Cooperatives**

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**Ministry of Agriculture and Cooperatives**

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(2)

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Maximum Residue Limits for Pesticide**

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The National Committee on Agricultural Commodity and Food Standards, Ministry of Agriculture and Cooperatives issued a Notification entitled the Thai Agricultural Standards on Pesticide Residues: Maximum Residue Limits (TAS 9002-2008) on 14 August 2008 which was published in the Royal Gazette dated 18 August 2008. Since then the regulation and information referred to in this standard have been changed. In order to expand the scope of standard to cover larger number of important pesticide residues related to agricultural commodity and food, the Ministry of Agriculture and Cooperatives deems it necessary to revise the standard by repealing TAS 9002-2008 and issuing TAS 9002-2013. The standard covers the Maximum Residue Limits of 48 pesticides listed by pesticide name as List 1 annexed to this standard. For convenience of use, Appendix 1 is also listed by agricultural commodities related to pesticides. However, any other pesticide residues that have not yet been specified in this standard will be added at later time.

This standard is based on the following documents:

Department of Agriculture. B.E. 2553 (2010). Report of the Study on Pesticide Residues obtained from Supervised Trials.

CX/PR 05/37/5. 2012. Draft and Proposed Draft Maximum Residue Limits in Foods and Feeds, including Spices at Step 7 and 4. Joint FAO/WHO Food Standards Programme, FAO, Rome.

CAC/GL 41-1993. Portion of Commodities to which Codex MRLs Apply and which is Analyzed. Joint FAO/WHO Food Standards Programme, FAO, Rome.

WHO/FSF/FOS/97.7. 1997. Guidelines for Predicting Dietary Intake of Pesticide Residues (revised). Prepared by the Global Environment Monitoring System-Food Contamination Monitoring and Assessment Programme (GEMS/Food) in collaboration with Codex Committee on Pesticide Residues, WHO, Geneva.



**NOTIFICATION OF MINISTRY OF AGRICULTURE AND COOPERATIVES**  
**SUBJECT: THAI AGRICULTURAL STANDARD:**  
**PESTICIDE RESIDUES: MAXIMUM RESIDUE LIMITS**  
**UNDER THE AGRICULTURAL STANDARDS ACT B.E. 2551 (2008) AND ITS**  
**AMENDMENTS**

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Whereas the Agricultural Standards Committee, by the decision of the Forth Session dated 28 August B.E. 2556 (2013) deems it necessary to establish an agricultural standard on Pesticide Residues: Maximum Residue Limits (MRLs) as a voluntary standard in accordance with the Agricultural Standards Act B.E. 2551 (2008) for the benefits of quality control and inspection, trade facilitation and consumer protection.

By virtue of Sections 5, 15 and 16 of the Agricultural Standards Act B.E. 2551 (2008), the Minister of Agriculture and Cooperatives hereby issues this Notification on Thai Agricultural Standard: Pesticide Residues: Maximum Residue Limits (MRLs) as follows:

1. The Notification of the Ministry of Agriculture and Cooperatives on Thai Agricultural Standard entitled Pesticide Residues: Maximum Residue Limits (MRLs) B.E.2551 dated 14 August B.E.2551 (2008) is repealed.

2. The Thai Agricultural Standard on Pesticide Residues: Maximum Residue Limits (MRLs) (TAS 9002-2013) is established as a voluntary standard, details of which are attached herewith.

Notified on 16 October B.E. 2556 (2013)  
Mr. Yukol Limlamthong  
Minister of Agriculture and Cooperatives

**THAI AGRICULTURAL STANDARD**  
**PESTICIDE RESIDUES: MAXIMUM RESIDUE LIMITS**

## **1. SCOPE**

1.1 This Thai Agricultural Standard covers the provisions on the Maximum Residue Limit (MRL) for pesticide in agricultural commodity used as food and feed. The MRL is used as reference on the production, trade, and control and inspection of agricultural commodities produced, imported and exported.

1.2 This standard does not cover the Extraneous Maximum Residue Limit (EMRL) for pesticide in the Thai Agricultural Standard entitled “Pesticide Residues: Extraneous Maximum Residue Limits” (TAS 9003).

## **2. DEFINITIONS**

For the purpose of this standard:

2.1 Agricultural commodity means produce or a product derived from agriculture, fishery, livestock or forestry and by-product of such produce or product to be used as food, feed, or processed as food and feed.

2.2 Pesticide<sup>1/</sup> means any substance intended for preventing, destroying, attracting, repelling, or controlling any pest including unwanted species of plants or animals during the production, storage, transport, distribution and processing of food, agricultural commodities, or animal feeds or which may be administered to animals for the control of ectoparasites. The term includes substances intended for use as a plant growth regulator, defoliant, desiccant, fruit thinning agent, or sprouting inhibitor and substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport. The term normally excludes fertilizers, plant and animal nutrients, food additives, feed additives and animal drugs.

2.3 Pesticide residue<sup>2/</sup> means any specified substance in food, agricultural commodities or animal feed resulting from the use of a pesticide. The term includes any derivatives of pesticide such as conversion products, metabolites, reaction products and impurities considered to be of toxicological significance.

2.4 Maximum Residue Limit (MRL) means the maximum concentration of a pesticide residue permitted in or on agricultural commodity, recommended by the Agricultural Standards Committee. The concentration is expressed in milligram of pesticide residue per kilogram of agricultural commodity.

2.5 Extraneous Maximum Residue Limit (EMRL) means the maximum concentration of a pesticide residue from former use of the pesticides that the registration is revoked but their slow degradation causes contamination or accumulation in the environment for long period of time and still be detectable in an agricultural commodity.

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<sup>1/</sup> and <sup>2/</sup> Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme; Codex.

2.6 Definition of residue means a pesticide residue, parent compound(s) and/or their metabolite(s), specified to be analysed for compliance with the MRL established in this standard.

2.7 Type 4 Hazardous Substance means the hazardous substance of which the production, import, export, or possession is prohibited in accordance with the Notification of the Ministry of Industry on the List of Hazardous Substances issued under the Hazardous Substance Act B.E. 2535 (1992) and amended act of B.E.2551 (2008).

### **3. REQUIREMENTS**

3.1 The pesticide residue found in agricultural commodity shall not exceed the Maximum Residue Limit (MRL) as established in List 1 as annexed herewith.

3.2 The extraneous pesticide residue found in agricultural commodity shall not exceed the Extraneous Maximum Residue Limit (EMRL) as established in the Thai Agricultural Standard entitled “Pesticide Residue: Extraneous Maximum Residue Limits” (TAS 9003).

3.3 The pesticide residue of Type 4 Hazardous Substance under the Hazardous Substance Act B.E. 2535 (1992) and amended act of B.E.2551 (2008) as shown in List 2 as annexed herewith shall not be detected.

3.4 Other than Sections 3.1, 3.2 and 3.3, the pesticide residue shall not exceed MRL as established by Codex<sup>3/</sup>

### **4. METHODS OF SAMPLING AND PORTION OF THE AGRICULTURAL COMMODITY TO BE ANALYSED**

4.1 Methods of sampling shall be in accordance with TAS 9025 entitled Thai Agricultural Standard on Methods of Sampling for the Determination of Pesticide Residues.

4.2 The MRL is established for various portions of agricultural commodity e.g. whole fruit, shelled peanut, thus, portion of agricultural commodity for residue analysis shall be in accordance with the requirements established in the Codex Alimentarius Guideline on Portion of Commodities to which Codex MRLs Apply and which is Analyzed (CAC/GL 41, latest version).

### **5. METHOD OF ANALYSIS**

Methods of pesticide residue analysis shall be selected according to its sensitivity for detecting residue at or below the MRL and its performance characteristics shall be appropriate and in compliance with one of the following criteria:

5.1 The method is issued by the national competent authority or international standard organizations or materials published in manuals or other publications or electronic media as internationally recognised; or

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<sup>3/</sup> These MRLs can be searched via URL <http://www.codexalimentarius.org/standards/pesticide-mrls/>

5.2 The method is validated through collaborative studies in accordance with internationally recognised protocol.

5.3 Where none of the abovementioned in Sections 5.1 and 5.2 is available, the methods shall be validated by single laboratory with quality system embedded. The validation shall follow the internationally recognised guideline.



**List 1**  
**Annexed to Thai Agricultural Standard**  
**Pesticide Residues: Maximum Residue Limits (TAS 9002-2013)**  
**Maximum Residue Limits listed by pesticides**

<b>Pesticide</b>	<b>Definition of residue</b>	<b>Agricultural Commodity</b>	<b>Maximum Residue Limit (MRL) (mg/kg)</b>
Chlorpyrifos	Chlorpyrifos	Okra	0.5
		Banana	2
		Rice	0.5
		Rice, husked and polished	0.1
		Spices, seeds	5
		Spices, Fruits or Berries	1
		Spices, Roots or Rhizomes	1
		Rambutan	0.5
		Soya bean (dry)	0.1
		Soya bean (young pod)	1
		Oil palm	0.05
		Peppers Chili	3
		Peppers Chili, dried	20
		Peppers, Sweet	2
		Coconut	0.05
		Peanut	0.05
		Sweet potato	0.05
		Longan	0.5
		Litchi	2
		Shallot	0.2
		Onion, Bulb	0.2
		Cattle meat	1 (fat)
		Meat of goats and sheep	1 (fat)
		Cattle, edible offal of	0.01
		Edible offal of goat and sheep	0.01
		Pig meat	0.02 (fat)
		Pig, edible offal of	0.01
		Poultry meat	0.01(fat)
Poultry, edible offal of	0.01		
Eggs	0.01		
Milks	0.02		
Chlorothalonil	Chlorothalonil	Soya bean (dry)	0.2
		Soya bean (young pod)	2
		Chinese cabbage, type Pe-tsai	1
		Chinese cabbage, type Pe-tsai	1
		Broccoli, Chinese / Chinese, kale	4
		Tomato	5
		Potato	0.2
Carbaryl	Carbaryl	Peanut	0.1
		Lead tree leaves	0.02
		Sweet corn (corn-on-the cob)	0.1
		Baby corn	0.1
		Maize	0.02
		Sorghum	10

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Carbaryl	Carbaryl	Rice, husked and polished	1
		Rambutan	1
		Cucumber and other cucurbits, except watermelon	3
		Watermelon	1
		Durian	1
		Oil palm	0.05
		Brassica vegetables	1
		Peppers Chili	0.5
		Peppers Chili, dried	2
		Peppers, Sweet	5
		Coconut	1
		Mango	1
		Mangosteen	1
		Potato	0.2
		Cacao beans	0.02
		Peanut	2
		Cashew nut	1
		Longan	1
		Litchi	1
		Citrus fruits	7
		Sugar cane	0.05
		Grapes	5
		Meat (from mammals other than marine mammals)	0.05
		Edible offal (mammalian)	1
Poultry meat	0.05		
Eggs	0.05		
Milks	0.05		
carbendazim / benomyl	Sum of carbendazim, benomyl, thiophanate-methyl, expressed as carbendazim	Chives, Chinese	3
		Rice, husked and polished	2
		Rambutan	3
		Spring onion	3
		Mung bean (dry)	0.5
		Soya bean (dry)	0.5
		Soya bean (young pods)	3
		Mulberry leaves	0.1
		Peppers Chili	2
		Peppers Chili, dried	20
		Tomato	0.5
		Mango	2
		Cotton seed	0.1
		Peanut	0.1
		Asparagus	0.2
		Shallot	3
		Onion, Bulb	2
		Grapes	3
		Sugar cane	0.1
		Cattle meat	0.05
Edible offal (mammalian)	0.05		
Poultry meat	0.05		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
carbendazim / benomyl	Sum of carbendazim, benomyl, thiophanate-methyl, expressed as carbendazim	Poultry fats	0.05
		Poultry, edible offal of	0.1
		Eggs	0.05
		Milks	0.05
carbosulfan	carbosulfan	Okra	0.5
		Lead tree leaves	0.2
		Sweet corn (corn-on-the cob)	0.05
		Baby corn	0.05
		Maize	0.05
		Sorghum	0.05
		Rice, husked and polished	0.2
		Rambutan	0.2
		Cucumber and other cucurbits, except watermelon	0.5
		Watermelon	0.2
		Mung bean (dry)	0.05
		Yard-long bean (pods)	0.1
		Garden pea (young pods)	0.1
		Soya bean (dry)	0.05
		Soya bean (young pods)	0.5
		Durian	0.2
		Oil palm	0.05
		Brassica vegetables	0.5
		Peppers Chili	0.5
		Peppers Chili, dried	5
		Tomato	0.5
		Egg plant, except tomato	0.03
		Coconut	0.2
		Sweet potato	0.05
		Potato	0.05
		Coffee beans	0.05
		Cacao beans	0.05
		Sesame seed	0.2
		Sunflower seed	0.05
		Peanut	0.05
		Cotton seed	0.05
		Linseed	0.05
Citrus fruits	0.1		
Asparagus	0.02		
Grapes	0.1		
Meat (from mammals other than marine mammals)	0.05		
Edible offal (mammalian)	0.05		
Poultry meat	0.05		
Poultry, edible offal of	0.05		
Eggs	0.05		
Milks	0.05		
Carbosulfan or Carbofuran	Sum of carbofuran and 3-hydroxycarbofuran, expressed as carbofuran	Okra	0.15
		Lead tree leaves	0.2
		Rambutan	0.05
		Garden pea (young pods)	0.15
		Durian	0.02

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Carbosulfan or Carbofuran	Sum of carbofuran and 3-hydroxycarbofuran, expressed as carbofuran	Oil palm	0.1
		Brassica vegetables	0.03
		Peppers Chili	0.5
		Peppers Chili, dried	2
		Egg plant, except tomato	0.1
		Coconut	0.02
		Cacao beans	0.05
		Sesame seed	0.1
		Sunflower seed	0.05
		Linseed	0.1
		Citrus fruits	0.02
		Asparagus	0.06
		Grapes	0.02
		Banana	0.01
		Sweet corn (corn-on-the cob)	0.01
		Baby corn	0.01
		Maize	0.05
		Sorghum	0.1
		Rice, husked and polished	0.1
		Mung bean (dry)	0.2
		Yard-long bean (pods)	0.1
		Soya bean (dry)	0.1
		Soya bean (young pod)	0.02
		Casava	0.02
		Coffee beans	1
		Peanut	0.1
		Cotton seed	0.1
		Sugar cane	0.1
		Meat (from mammals other than marine mammals)	0.05
		Edible offal (mammalian)	0.05
		Mammalian fats	0.05
Poultry meat	0.01		
Poultry, edible offal of	0.01		
Eggs	0.01		
Milks	0.01		
Captan	Captan	Barley	0.02
		Soya bean (dry)	5
		Soya bean (young pod)	5
		Oil palm	5
		Mango	5
		Cotton seed	5
		Peanut	5
Quintozene	Quintozene	Spices, seeds	0.1
		Spices, Fruits or Berries	0.02
		Spices, Roots or Rhizomes	2
Sulfuryl fluoride	Sulfuryl fluoride	Rice, husked and polished	0.1
Cypermethrin	Cypermethrin	Okra	0.5
		Sweet corn (com-on-the cob)	0.05
		Baby corn	0.05
		Maize	0.05

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Cypermethrin	Cypermethrin	Spices, Fruits or Berries	0.1
		Spices, Roots or Rhizomes	0.2
		Yard-long bean (pods)	0.7
		Garden pea (young pods)	0.05
		Soya bean (dry)	0.05
		Soya bean (young pods)	5
		Durian	1
		Brassica vegetables	1
		Peppers Chili	2
		Peppers Chili, dried	10
		Tomato	0.2
		Egg plant, except tomato	0.03
		Mango	0.7
		Papaya	0.5
		Cotton seed	0.1
		Longan	1
		Litchi	2
		Citrus fruits, except pummelo and grapefruit	0.3
		Grapefruit	0.5
		Pummelo	0.5
		Asparagus	0.4
		Shallot	0.1
		Onion, Bulb	0.01
		Sugar cane	0.2
		Meat (from mammals other than marine mammals)	2 (fat)
		Edible offal (mammalian)	0.05
		Poultry meat	0.1(fat)
		Poultry, edible offal of	0.05
Chicken fats	0.1		
Eggs	0.05		
Milks	0.05F		
2,4-D	Sum of 2,4-D and its salt and esters, expressed as 2,4-D	Sweet corn (corn-on-the cob)	0.05
		Baby corn	0.05
		Maize	0.05
		Sorghum	0.01
		Rice, husked and polished	0.1
		Spring onion	0.05
		Pineapple	0.05
		Meat (from mammals other than marine mammals)	0.2
		Edible offal (Mammalian)	1
		Poultry meat	0.05
		Poultry, edible offal of	0.05
		Eggs	0.01
		Milks	0.01
		Deltamethrin	sum of deltamethrin alpha-R and trans- deltamethrin (fat soluble)
Baby corn	0.02		
Maize	1		
Sweet corn (corn-on-the cob)	0.02		
Spring onion	0.5		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Deltamethrin	sum of deltamethrin alpha-R and trans- deltamethrin (fat soluble)	Yard-long bean (pods)	0.2
		Oil palm	0.05
		Flowering white cabbage	2
		Chinese cabbage, type Pe-tsai	2
		Broccoli, Chinese / Chinese, kale	2
		Brassica vegetables, except cabbages	0.1
		Peppers Chili	0.1
		Peppers Chili, dried	1
		Tomato	0.3
		Mango	0.2
		Cotton seed	0.05
		Cashew nut	0.02
		Asparagus	0.1
		Shallot	0.1
		Onion, Bulb	0.05
		Sugar cane	0.05
		Cattle meat	0.5 (fat)
		Meat of goat and sheep	0.5 (fat)
		Cattle, edible offal of	0.03
		Edible offal of goat and sheep	0.03
		Pig meat	0.5 (fat)
		Pig, edible offal of	0.03
		Poultry meat	0.1 (fat)
		Poultry, edible offal of	0.02
		Poultry fats	0.1 (fat)
		Eggs	0.02
Milks	0.05 (fat)		
Dichlorvos	Dichlorvos	Spices	0.1
		Citrus fruits	0.2
		Cereal grains	0.2
		Meat (from mammals other than marine mammals)	0.05
		Poultry meat	0.05
		Milks	0.02
Dicofol	<u>Plant commodities</u> : dicofol (sum of o, p' & p,p'- isomers) (fat soluble) <u>Animal commodities</u> : sum of dicofol and 2,2-dichloro-1, 1-bis (4-chlorophenyl) ethanol (p,p' - FW 152), expressed as dicofol (fat soluble)	Spices, seeds	0.05
		Spices, Fruits or Berries	0.1
		Spices, Roots or Rhizomes	0.1
		Cucumber	0.5
		Mung bean (dry)	0.1
		Soya bean (dry)	0.05
		Tomato	1
		Cattle meat	3 (fat)
		Cattle, edible offal of	1
		Poultry meat	0.1 (fat)
		Poultry, edible offal of	0.05
		Eggs	0.05
Milks	0.1F		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Group of dithiocarbamates: zinep, thiram, propineb, maneb, mancozeb	total dithiocarbamates determined and expresses as CS <sub>2</sub>	Okra	0.2
		Garlic	0.5
		Rice, husked and polished	0.05
		Rambutan	2
		Spring onion	10
		Cucumber	2
		Muskmelon	0.5
		Watermelon	1
		Melon, except cucumber and watermelon	0.5
		Soya bean (dry)	0.1
		Soya bean (young pod)	0.2
		Durian	2
		Oil palm	0.1
		Chinese cabbage, type Pe-tsai	5
		Broccoli, Chinese / Chinese, kale	15
		Water spinach	0.3
		Taro	0.1
		Peppers Chili	2
		Peppers, Sweet	1
		Peppers Chili, dried	10
		Pumpkins	0.2
		Tomato	2
		Lime	2
		Mango	2
		Potato	0.2
		Peanut	0.1
		Citrus fruits	2
		Asparagus	0.1
		Shallot	0.5
		Onion, Bulb	0.5
		Grapes	2
		Meat (from mammals other than marine mammals)	0.05
		Edible offal (mammalian)	0.1
Poultry meat	0.1		
Poultry, edible offal of	0.1		
Eggs	0.05		
Milks	0.05		
Dimethoate	Dimethoate	Sorghum	0.01
		Spices, Seeds	5
		Spices, Fruits or Berries	0.5
		Spices, Roots or Rhizomes	0.1
		Cucumber	1
		Muskmelon	1
		Yard-long bean (pods)	0.05
		Bean (dry)	0.1
		Tomato	2
		Cotton seed	0.05
		Citrus fruits	5
Shallot	0.05		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Dimethoate	Dimethoate	Onion, Bulb	0.05
		Meat (from mammals other than marine mammals)	0.05
		Mammalian fats	0.05
		Edible offal (Mammalian)	0.05
		Poultry meat	0.05
		Poultry fats	0.05
		Poultry, edible offal of	0.05
		Eggs	0.05
Diazinon	Diazinon	Milks	0.05
		Sweet corn (corn-on-the cob)	0.02
		Baby corn	0.02
		Maize	0.02
		Sorghum	0.02
		Spices, seeds	5
		Spices, Fruits or Berries	0.1
		Spices, Roots or Rhizomes	0.5
		Teas	0.1
		Chinese cabbage, type Pe-tsai	0.05
		Broccoli, Chinese / Chinese, kale	0.05
		Brassica vegetables, except Pe-tsai and Broccoli, Chinese	0.5
		Coffee beans	0.2
		Cotton seed	0.1
		Meat (from mammals other than marine mammals)	2 (fat)
		Edible offal (mammalian)	0.03
		Poultry meat	0.02
		Poultry, edible offal of	0.02
Eggs	0.02		
Milks	0.02 F		
Triazophos	Triazophos	Garlic	0.05
		Sorghum	0.05
		Spices, Fruits or Berries	0.07
		Spices, Roots or Rhizomes	0.1
		Mung bean (dry)	0.2
		Yard-long bean (pods)	0.4
		Soya bean (dry)	0.05
		Soya bean (seed from young pod)	0.5
		Soya bean (young pod)	1
		Jujube	0.03
		Coffee beans	0.05
		Peanut	0.05
		Cacao beans	0.05
		Sesame seed	0.05
		Sunflower seed	0.05
		Shallot	0.05
		Onion, Bulb	0.05
		Grapes	0.02
		Cattle meat	0.01
		Poultry meat	0.01
Milks	0.01		



Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Tebuconazole	Tebuconazole	Onion, Bulb	0.1
Buprofezin	Buprofezin	Cotton seed	0.35
Permethrin	Permethrin	Spices	0.05
Paraquat	Paraquat cation	Sweet corn (com-on-the cob)	0.05
		Baby corn	0.05
		Maize	0.03
		Sorghum	0.03
		Rice	0.05
		Rice, husked and polished	0.05
		Cucumber and other cucurbits except watermelon	0.02
		Pulses	0.5
		Soya bean (dry)	0.1
		Fruits (inedible peel, except citrus fruits)	0.01
		Leafy vegetables	0.07
		Root and tuber vegetables	0.05
		Tomato	0.05
		Potato	0.05
		Cotton seed	2
		Strewberry	0.01
		Citrus fruits	0.02
		Grapes	0.01
		Meat (from mammals other than marine mammals)	0.005
		Edible offal (Mammalian)	0.05
Poultry meat	0.005		
Poultry, edible offal of	0.005		
Eggs	0.005		
Milks	0.005		
Pirimiphos-methyl	Pirimiphos-methyl	Sweet corn (com-on-the cob)	1
		Baby corn	1
		Maize	1
		Paddy	7
		Rice, husked and polished	5
		Spices, Seeds	3
		Spices, Fruits or Berries	0.5
		Oil palm	0.1
		Cacao beans	0.05
		Kapok seed	0.1
		Cashew nut	0.1
		Meat (from mammals other than marine mammals)	0.01
		Edible offal (mammalian)	0.01
		Poultry meat	0.01
		Poultry, edible offal of	0.01
		Eggs	0.01
Milks	0.01		
Prothiofos	Prothiofos	Mung bean (dry)	0.05
		Peppers Chili	3
		Peppers Chili, dried	20
		Potato	0.05
		Peanut	0.05

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Profenofos	Profenofos	Cabbages	1
		Rose apple	0.05
		Spring onion	0.05
		Soya bean (dry)	0.05
		Durian	0.05
		Cotton seed oil	0.05
		Brassica vegetables, except cabbages, head	0.5
		Peppers Chili	3
		Peppers, Sweet	0.5
		Peppers Chili, dried	20
		Tomato	10
		Lime	0.05
		Mango	0.2
		Mangosteen	10
		Cotton seed	3
		Citrus fruits, except pummelo	0.1
		Pummelo	2
		Shallot	0.05
		Onion, Bulb	0.05
		Grapes	0.05
		Meat (from mammals other than marine mammals)	0.05
		Edible offal (mammalian)	0.05
		Poultry meat	0.05
		Poultry, edible offal of	0.05
		Eggs	0.02
		Milks	0.01
Fipronil	Fipronil	Holy basil	0.2
		Rice	0.01
		Rice, husked and polished	0.01
		Yard-long bean (pods)	0.04
		Cotton seed	0.01
		Sweet basil	0.2
Famoxadone	Famoxadone	Potato	0.02
Fenvalerate	Fenvalerate	Cabbages	3
		Sweet corn (corn-on-the cob)	0.1
		Baby corn	0.1
		Yard-long bean (pods)	1
		Soya bean (dry)	0.1
		Oil palm	0.5
		Chinese cabbage, type Pe-tsai	1
		Broccoli, Chinese / Chinese, kale	3
		Brassica vegetables, except cabbages (head)	2
		Tomato	1
		Mango	1.5
		Potato	0.05
		Cotton seed	0.2
		Peanut	0.1
Longan	1		

<b>Pesticide</b>	<b>Definition of residue</b>	<b>Agricultural Commodity</b>	<b>Maximum Residue Limit (MRL) (mg/kg)</b>
Fenvalerate	Fenvalerate	Litchi	1
		Meat (from mammals other than marine mammals)	1 (fat)
		Edible offal (Mammalian)	0.02
		Milks	0.1F
Fenitrothion	Fenitrothion	Sweet corn (corn-on-the cob)	1
		Baby corn	1
		Maize	1
		Rice	6
		Rice, husked and polished	1
		Spices, Seeds	7
		Spices, Fruits or Berries	1
		Spices, Roots or Rhizomes	0.1
		Teas	0.5
		Soya bean (dry)	0.5
		Soya bean (young pod)	0.5
		Coffee beans	0.05
		Meat (from mammals other than marine mammals)	0.05
		Poultry meat	0.05
		Eggs	0.05
		Milks	0.01
Phosalone	Phosalone	Spices, Seeds	2
		Spices, Fruits or Berries	2
		Spices, Roots or Rhizomes	3
		Spring onion	0.5
		Yard-long bean (pods)	0.5
		Garden pea (young pods)	0.5
		Soya bean (dry)	0.05
		Soya bean (young pod)	0.5
		Durian	1
		Mulberry leaves	0.1
		Brassica Vegetables	0.5
		Peppers Chili	0.5
		Peppers, Sweet	0.5
		Peppers Chili, dried	4
		Tomato	0.5
		Egg plant, except tomato	0.5
		Mangosteen	1
		Cotton seed	1
		Citrus fruits	1
		Asparagus	0.5
Shallot	0.5		
Onion, Bulb	0.5		
Folpet	Folpet	Rambutan	0.1
Phenthoate	Phenthoate	Spices, Seeds	7
Malathion	Malathion	Cabbages	8
		Sweet corn (corn-on-the cob)	0.02
		Baby corn	0.02
		Maize	0.05
		Sorghum	3

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Malathion	Malathion	Spices, Seeds	2
		Spices, Fruits or Berries	1
		Spices, Roots or Rhizomes	0.5
		Cauliflower	0.5
		Spring onion	5
		Broccoli	5
		Chinese cabbage, type Pe-tsai	8
		Broccoli, Chinese / Chinese, kale	3
		Peppers Chili	0.1
		Peppers Chili, dried	1
		Tomato	0.5
		Casava	0.5
		Citrus fruits	7
		Pummelo	0.2
		Shallot	1
		Onion, Bulb	1
		Sugar cane	0.02
		Metalaxyl or Metalaxyl M	Metalaxyl
Baby corn	0.05		
Maize	0.05		
Spices, seeds	5		
Cucumber	0.5		
Muskmelon	0.2		
Watermelon	0.2		
Cucumber	0.5		
Durian	0.5		
Loofah, angled	0.2		
Broccoli, Chinese / Chinese, kale	2		
Water spinach	2		
Taro	0.5		
Peppers, black; white or green	0.05		
Betel leaves	0.05		
Pumpkins	0.2		
Wax gourd	0.2		
Potato	0.05		
Citrus fruits	5		
Pineapple	0.1		
Onion, Bulb	2		
Grapes	1		
Tomato	0.2		
methidathion	methidathion	Rambutan	0.5
		Durian	0.5
		Sugar apple	0.5
		Pear and Oriental Pear	0.2
		Citrus fruits	0.5
		Grapes	0.2
		Meat (from mammals other than marine mammals)	0.02
		Edible offal (mammalian)	0.02
Poultry meat	0.02		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Methidathion	Methidathion	Poultry, edible offal of	0.02
		Eggs	0.02
		Milks	0.001
Methyl bromide	Bromide ion from the use of methyl bromide and other sources but not including covalently bound bromine	Rice, husked and polished	50
Methyl bromide	Methyl bromide	Rice, husked and polished ( at the point of entry into a country or at point of fumigation and commodity has been freely exposed to air for a period of at least 24 h after fumigation.)	1
		Rice, husked and polished, at point of retail sale	0.01
Methomyl	Sum of Methomyl and Thiodicarb, expressed as methomyl	Okra	0.5
		Sweet corn (corn-on-the cob)	0.1
		Baby corn	0.1
		Maize	0.02
		Sorghum	0.02
		Fruiting vegetables, Cucubits, including Watermelon, immature	0.1
		Watermelon	0.1
		Mung bean (dry)	0.05
		Yard-long bean (pods)	1
		Soya bean (dry)	0.2
		Soya bean (young pod)	0.5
		Soya bean oil	0.2
		Cotton seed oil	0.04
		Pear and Orient pear	0.3
		Peppers Chili	1
		Peppers Chili, dried	10
		Tomato	1
		Egg plant, except Tomato	0.2
		Lime	1
		Potato	0.02
		Sesame seed	0.2
		Cotton seed	0.2
		Peanut	0.1
		Citrus fruits	1
		Asparagus	2
		Shallot	0.2
		Onion, Bulb	0.2
		Grapes	0.3
		Apple	0.3
		Meat (from mammals other than marine mammals)	0.02
Edible offal (mammalian)	0.02		
Poultry meat	0.02		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
		Poultry, edible offal of	0.02
Methomyl	Sum of Methomyl and Thiodicarb, expressed as methomyl	Eggs	0.02
		Milks	0.02
Lambda-cyhalothrin	Cyhalothrin (sum of all isomers)	Okra	0.03
		Holy basil	0.5
		Sorghum	0.2
		Rambutan	0.5
		Mung bean (dry)	0.2
		Soya bean (dry)	0.2
		Soya bean (young pod)	0.2
		Durian	0.5
		Oil palm	0.2
		Brassica vegetables, except broccoli and cauliflower	0.3
		Broccoli and cauliflower	0.5
		Mango	0.2
		Egg plant, except tomato	0.3
		Tomato	0.3
		Peppers Chili	0.3
		Peppers, Sweet	0.3
		Peppers Chili, dried	3
		Cacao beans	0.02
		Sesame seed	0.2
		Kapok seed	0.02
		Cotton seed	0.02
		Longan	0.5
		Litchi	0.5
Asparagus	0.02		
Sweet basil	0.5		
Acephate	Acephate	Rice	1
		Rice, husked and polished	1
		Spices	0.2
		Mung bean (dry)	0.3
		Soya bean (dry)	0.3
		Coffee beans	0.05
		Cacao beans	0.05
		Cotton seed	2
		Peanut	0.2
		Meat (from mammals other than marine mammals)	0.05
		Edible offal (mammalian)	0.05
		Poultry meat	0.01
		Poultry, edible offal of	0.01
		Eggs	0.01
		Milks	0.02
Atrazine	Atrazine	Sweet corn (corn-on-the cob)	0.1
		Baby corn	0.1
		Maize	0.1
		Pineapple	0.1
		Sugar cane	0.1
Abamectin	Abamectin	Watermelon	0.01
		Yard-long bean (pods)	0.01

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
Abamectin	Abamectin	Garden pea (young pods)	0.01
		Flowering white cabbage	0.01
		Broccoli, Chinese / Chinese, kale	0.01
		Brassica vegetables	0.01
		Peppers Chili	0.01
		Peppers, Sweet	0.02
		Peppers Chili, dried	0.2
		Thai egg plant	0.02
		Lime	0.01
		Cotton seed	0.01
		Citrus fruits	0.01
		Grapes	0.01
		Meat (from mammals other than marine mammals)	0.01
		Mammalian fats	0.1
		Edible offal (mammalian)	0.1
		Poultry meat	0.01
		Poultry, edible offal of	0.02
Eggs	0.01		
Milks	0.005		
Ametryn	Ametryn	Teas	0.05
		Coffee beans	0.05
		Pineapple	0.05
		Sugar cane	0.05
Imidacloprid	Imidacloprid	Rice	0.05
		Rice, husked and polished	0.05
		Mandarins	1
Ethephon	Ethephon	Banana	2
		Cherry	3
		Durian	2
		Mango	2
		Pineapple	2
		Grapes	1
		Apple	1
		Meat (from mammals other than marine mammals)	0.1
		Edible offal (mammalian)	0.2
		Poultry meat	0.1
		Poultry, edible offal of	0.2
		Eggs	0.2
Milks	0.05		
Ethion	Ethion	Spices, Seeds	3
		Spices, Fruits or Berries	5
		Spices, Roots or Rhizomes	0.3
		Cucumber and other cucurbits except watermelon	0.3
		Pulses	0.1
		Legume vegetables	0.3
		Peppers Chili	3
		Peppers Chili, dried	20
		Tomato	0.3
Egg plant, except tomato	0.3		

Pesticide	Definition of residue	Agricultural Commodity	Maximum Residue Limit (MRL) (mg/kg)
		Lime	1
Ethion	Ethion	Mandarins	2
		Pummelo	1
Iprodione	Iprodione	Spices, Seeds	0.05
		Spices, Roots or Rhizomes	0.1
Omethoate	Omethoate	Lead tree leaves	0.05
		Mung bean (dry)	0.05
		Yard-long bean (pods)	0.05
		Soya bean (dry)	0.05
		Casava	0.02
		Coffee beans	0.05
		Cotton seed	0.05
Hydrogen Phosphide, in the form of Aluminium Phosphide or Magnesium Phosphide or Phosphine	Hydrogen Phosphide	Rice, husked and polished	0.1

#### Explanatory notes

- Spices, Seeds: the commodities in this group include, but not limited to, coriander seed, culantro seed, celery seed, cumin seed.
- Spices, Fruits or Berries: the commodities in this group include, but not limited to, white and black peppers, immature peppers, laurel, star anise.
- Spices, Roots or Rhizomes: the commodities in this group include, but not limited to, ginger, galangal, tumeric, fingerroot, coriander root.
- Spices: the commodities in this group include, but not limited to, seeds, fruits or berries, roots or rhizomes, bark (such as cinnamon bark), buds (such as cloves) and all other spices.
- Rice means non-glutinous aromatic rice or glutinous aromatic rice retaining its husk after threshing.
- Rice, husked and polished means rice from which only the husk has been removed from paddy or some parts of bran layer may be removed during husking to be white rice.
- Peppers Chili, dried means dried chili peppers made from chili peppers such as bird chili peppers, long peppers.
- Brassica vegetables means vegetables from leaf, stem or flower of plant in genus *Brassica* sp. Family Cruciferae such as cabbages, Broccoli, Chinese / Chinese, kale, cauliflower, broccoli, Flowering white cabbage, Chinese cabbage, type Pe-tsai, mustard green, lettuce.
- Egg plant, except tomato: the commodities in this group include, but not limited to, Thai egg plant, pea egg plant, aubergines.
- (fat) indicated after the MRLs of meat for fat-soluble pesticide residues means the MRLs applied to the fat of meat.
- "F" indicated after the MRLs of milk and milk products for fat-soluble pesticide residues means the MRLs for fat-soluble pesticide residues in milk and milk products expressed on a whole product based. In addition, criteria for using the MRLs with "F" are as follows:

(1) For a "milk product" with a fat content less than 2 %, the MRLs applied should be as half of those specified for milk.

(2) For a "milk product" with a fat content of 2 % or more, the MRLs applied should be 25 times of the established MRLs for milk, expressed on a fat basis.



**List 2**  
**annexed to Thai Agricultural Standard**  
**Pesticide Residues: Maximum Residue Limits (TAS 9002-2013)**  
**List of pesticide whose residue shall not be detected in agricultural commodity**

1. 2,4,5-T or 2,4,5-trichlorophenoxy acetic acid
2. 2,4,5-TCP or 2,4,5-trichlorophenol
3. 2,4,5-TP or ( $\pm$ )-2-(2,4,5-trichlorophenoxy) propionic acid
4. 4-(4-chloro-o-tolyloxy) butyric acid or MCPB
5. chlordimeform
6. chlordecone
7. chlorthiophos
8. chlorobenzilate
9. copper arsenate hydroxide
10. captafol
11. calcium arsenate
12. sulfotep
13. safrole
14. sodium arsenite
15. cycloheximide
16. cyhexatin
17. daminozide
18. DBCP or 1,2-dibromo-3-chloropropane
19. demeton
20. demephion
21. 4,6-dinitro-o-cresol or DNOC
22. disulfoton
23. dinoseb
24. dinoterb
25. dimefox
26. toxaphene or camphechlor
27. TEPP or tetraethyl pyrophosphate
28. nitrofen
29. beta-HCH or 1,3,5/2,4,6-hexachlorocyclohexane
30. BHC(benzene hexachloride) or HCH(hexachlorocyclohexane)
31. benzidine
32. bromophos
33. bromophos-ethyl
34. binapacryl

35. paris green
36. parathion
37. parathion-methyl
38. prothoate
39. phosphorus
40. phosphamidon (E)+(Z)-isomers
41. phosphamidon (Z)-isomer
42. phosphamidon (E)-isomer
43. phenothiol or MCPA-thioethyl or S-ethyl 4-chloro-o-tolyloxythioacetate
44. fensulfothion
45. fentin
46. fonofos (unstated stereochemistry)
47. fonofos (racemate)
48. fonofos (R)-isomer
49. fonofos (S)-isomer
50. phorate
51. methamidophos
52. mecoprop (unstated stereochemistry)
53. mecoprop (racemate)
54. mephosfolan
55. mevinphos
56. monocrotophos
57. mirex
58. lindane or gamma-hexachlorocyclohexane or gamma-HCH
59. lead arsenate
60. leptophos
61. azinphos-methyl
62. azinphos-ethyl
63. amitrole
64. aminocarb
65. aramite
66. EDB or ethylene dibromide
67. ethylene dichloride
68. ethylene oxide or 1,2-epoxyethane
69. endosulfan
70. MGK repellent-11 or 1,5a,6,9,9a,9b-hexahydro-4a(4H)-dibenzofurancarboxaldehyde
71. hexachlorobenzene

Source: Notification of the Ministry of Industry: List of Hazardous Substances

## Appendix A

## Pesticide Residues: Maximum Residue Limits sorting by agricultural commodity

The maximum residue limit (MRL) shown in the following are rewritten based on List 1 of this standard. This list is sorted by agricultural commodity for convenience of use.

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Okra	chlorpyrifos	0.5
	carbosulfan	0.5
	carbosulfan / carbofuran <sup>(2)</sup>	0.15
	cypermethrin	0.5
	dithiocarbamates <sup>(3)</sup>	0.2
	methomyl	0.5
	lambda-cyhalothrin	0.03
Lead tree leaves	carbaryl	0.02
	carbosulfan	0.2
	carbosulfan / carbofuran <sup>(2)</sup>	0.2
	omethoate	0.05
Garlic	deltamethrin	0.1
	dithiocarbamates <sup>(3)</sup>	0.5
	triazophos	0.05
Banana	chlorpyrifos	2
	carbosulfan / carbofuran <sup>(2)</sup>	0.01
	ethephon	2
Basil	fipronil	0.2
	lambda-cyhalothrin	0.5
Cabbages	profenofos	1
	fenvalerate	3
	malathion	8
Other cabbages, except broccoli and cauliflower	lambda-cyhalothrin	0.3
Chives, Chinese	carbendazim / benomyl	3
Grapefruit	cypermethrin	0.5
Barley	captan	0.02
Rice	chlorpyrifos	0.5
	paraquat	0.05
	pirimiphos-methyl	7
	fipronil	0.01
	fenitrothion	6
	acephate	1
	imidacloprid	0.05
Sweet corn (corn-on-the cob)	2,4-D	0.05
	carbaryl	0.1
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.05
	deltamethrin	0.02
	diazinon	0.02
	paraquat	0.05
	pirimiphos-methyl	1
	fenvalerate	0.1
	fenitrothion	1
	malathion	0.02
	metalaxyl or metalaxyl M	0.05

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Sweet corn (corn-on-the cob)	methomyl	0.1
	atrazine	0.1
Baby corn	2,4-D	0.05
	carbaryl	0.1
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.05
	deltamethrin	0.02
	diazinon	0.02
	paraquat	0.05
	pirimiphos-methyl	1
	fenvalerate	0.1
	fenitrothion	1
	malathion	0.02
	metalaxyl or metalaxyl M	0.05
	methomyl	0.1
atrazine	0.1	
Maize	2,4-D	0.05
	carbaryl	0.02
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.05
	cypermethrin	0.05
	deltamethrin	1
	diazinon	0.02
	paraquat	0.03
	pirimiphos-methyl	1
	fenitrothion	1
	malathion	0.05
	metalaxyl or metalaxyl M	0.05
	methomyl	0.02
	atrazine	0.1
Sorghum	2,4-D	0.01
	carbaryl	10
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	dimethoate	0.01
	diazinon	0.02
	triazophos	0.05
	paraquat	0.03
	malathion	3
	methomyl	0.02
	lambda-cyhalothrin	0.2
Rice, husked and polished	chlorpyrifos	0.1
	carbaryl	1
	carbendazim / benomyl	2
	carbosulfan	0.2
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	sulfuryl fluoride	0.1
	2,4-D	0.1
	dithiocarbamates <sup>(3)</sup>	0.05
	paraquat	0.05
	pirimiphos-methyl	5
fipronil	0.01	

<b>Commodity</b>	<b>Pesticide<sup>(1)</sup></b>	<b>Maximum Residue Limit (MRL) (mg/kg)</b>
Rice, husked and polished	fenitrothion	1
	methyl bromide (analysed as bromind ion)	50
	acephate	1
	imidacloprid	0.05
	hydrogen phosphide	0.1
Rice, husked and polished (at point of sale)	methyl bromide (analysed as methyl bromide)	0.01
Rice, husked and polished ( at the point of entry into a country or at point of fumigation and commodity has been freely exposed to air for a period of at least 24 h after fumigation.)	methyl bromide (analysed as methyl bromide)	1
Spices, Fruits or Berries	chlorpyrifos	1
	quintozene	0.02
	cypermethrin	0.1
	dicofol	0.1
	dimethoate	0.5
	diazinon	0.1
	triazophos	0.07
	pirimiphos-methyl	0.5
	fenitrothion	1
	phosalone	2
	malathion	1
ethion	5	
Spices, Seeds	chlorpyrifos	5
	quintozene	0.1
	dicofol	0.05
	dimethoate	5
	diazinon	5
	pirimiphos-methyl	3
	phenthoate	7
	fenitrothion	7
	phosalone	2
	malathion	2
	metalaxyl or metalaxyl M	5
	ethion	3
iprodione	0.05	
Spices, Roots or Rhizomes	chlorpyrifos	1
	quintozene	2
	cypermethrin	0.2
	dicofol	0.1
	dimethoate	0.1
	diazinon	0.5
	triazophos	0.1
	fenitrothion	0.1
	phosalone	3
	malathion	0.5
	ethion	0.3
iprodione	0.1	

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Spices	dichlorvos	0.1
	permethrin	0.05
	acephate	0.2
Rambutan	chlorpyrifos	0.5
	carbaryl	1
	carbendazim / benomyl	3
	carbosulfan	0.2
	carbosulfan / carbofuran <sup>(2)</sup>	0.05
	dithiocarbamates <sup>(3)</sup>	2
	folpet	0.1
	methidation	0.5
	lambda-cyhalothrin	0.5
Rose apple	profenofos	0.05
Cherry	ethephon	3
Cauliflower	malathion	0.5
Spring onion	2,4-D	0.05
	carbendazim / benomyl	3
	deltamethrin	0.5
	dithiocarbamates <sup>(3)</sup>	10
	profenofos	0.05
	phosalone	0.5
	malathion	5
Fruiting vegetables, cucurbits	dicofol	0.5
	dithiocarbamates <sup>(3)</sup>	2
	dimethoate	1
	metalaxyl or metalaxyl M	0.5
Cucumber and other cucurbits, except watermelon	paraquat	0.02
	carbaryl	3
	carbosulfan	0.5
	ethion	0.3
Muskmelon	dithiocarbamates <sup>(3)</sup>	0.5
	dimethoate	1
	metalaxyl or metalaxyl M	0.2
Watermelon	carbaryl	1
	carbosulfan	0.2
	dithiocarbamates <sup>(3)</sup>	1
	metalaxyl or metalaxyl M	0.2
	methomyl	0.1
	abamectin	0.01
Cucumber	metalaxyl or metalaxyl M	0.5
Fruiting vegetables, cucurbits, except cucumber and watermelon	dithiocarbamates <sup>(3)</sup>	0.5
Mung bean (dry)	carbendazim / benomyl	0.5
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.2
	dicofol	0.1
	triazophos	0.2
	prothiofos	0.05
	methomyl	0.05
	lambda-cyhalothrin	0.2
acephate	0.3	

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Mung bean (dry)	omethoate	0.05
Yard-long bean (pods)	carbosulfan	0.1
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	cypermethrin	0.7
	deltamethrin	0.2
	dimethoate	0.05
	triazophos	0.4
	fipronil	0.04
	fenvalerate	1
	phosalone	0.5
	methomyl	1
	abamectin	0.01
	omethoate	0.05
Legume vegetables	ethion	0.3
Pulses	dimethoate	0.1
	paraquat	0.5
	ethion	0.1
Garden pea (young pods)	carbosulfan	0.1
	carbosulfan / carbofuran <sup>(2)</sup>	0.15
	cypermethrin	0.05
	phosalone	0.5
	abamectin	0.01
Soya bean (young pod)	chlorpyrifos	1
	chlorothalonil	2
	carbendazim / benomyl	3
	carbosulfan	0.5
	carbosulfan / carbofuran <sup>(2)</sup>	0.02
	captan	5
	cypermethrin	5
	dithiocarbamates <sup>(3)</sup>	0.2
	fenitrothion	0.5
	phosalone	0.5
	methomyl	0.5
	lambda-cyhalothrin	0.2
	triazophos	1
Soya bean (immature seeds)	triazophos	0.5
Soya bean (dry)	chlorpyrifos	0.1
	chlorothalonil	0.2
	carbendazim / benomyl	0.5
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	captan	5
	cypermethrin	0.05
	dicofol	0.05
	dithiocarbamates <sup>(3)</sup>	0.1
	triazophos	0.05
	paraquat	0.1
	profenofos	0.05
	fenvalerate	0.1
	fenitrothion	0.5
	phosalone	0.05
methomyl	0.2	

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Soya bean (dry)	lambda-cyhalothrin	0.2
	acephate	0.3
	omethoate	0.05
Durian	carbaryl	1
	carbosulfan	0.2
	carbosulfan / carbofuran <sup>(2)</sup>	0.02
	cypermethrin	1
	dithiocarbamates <sup>(3)</sup>	2
	profenofos	0.05
	phosalone	1
	metalaxyl or metalaxyl M	0.5
	methidation	0.5
	lambda-cyhalothrin	0.5
ethephon	2	
Cereal grains	dichlorvos	0.2
Sugar apple	methidation	0.5
Soya bean oil	methomyl	0.2
Cotton seed oil	profenofos	0.05
	methomyl	0.04
Broccoli	malathion	5
Broccoli and cauliflower	lambda-cyhalothrin	0.5
Loofah, angled	metalaxyl or metalaxyl M	0.2
Teas	diazinon	0.1
	fenitrothion	0.5
	ametryn	0.05
Mulberry leaves	carbendazim / benomyl	0.1
	phosalone	0.1
Oil palm	chlorpyrifos	0.05
	carbaryl	0.05
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	captan	5
	deltamethrin	0.05
	dithiocarbamates <sup>(3)</sup>	0.1
	pirimiphos-methyl	0.1
fenvalerate	0.5	
Oil palm	lambda-cyhalothrin	0.2
Fruits (inedible peel, except citrus fruits)	paraquat	0.01
Pear and Orient Pear	methidation	0.2
	methomyl	0.3
Flowering white cabbage	deltamethrin	2
	abamectin	0.01
Chinese cabbage, type Pe-tsai	chlorothalonil	1
	deltamethrin	2
	diazinon	0.05
	fenvalerate	1
	malathion	8
Chinese cabbage, type Pe-tsai	chlorothalonil	1
	dithiocarbamates <sup>(3)</sup>	5
Broccoli, Chinese / Chinese, kale	chlorothalonil	4
	deltamethrin	2



Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Broccoli, Chinese / Chinese, kale	dithiocarbamates <sup>(3)</sup>	15
	diazinon	0.05
	fenvalerate	3
	malathion	3
	metalaxyl or metalaxyl M	2
	abamectin	0.01
Brassica vegetables	carbaryl	1
	carbosulfan	0.5
	carbosulfan / carbofuran <sup>(2)</sup>	0.03
	cypermethrin	1
	phosalone	0.5
	abamectin	0.01
Brassica vegetables, except cabbages, head	deltamethrin	0.1
	profenofos	0.5
others Brassica vegetables	diazinon	0.5
	fenvalerate	2
Water spinach	dithiocarbamates <sup>(3)</sup>	0.3
	metalaxyl or metalaxyl M	2
Leafy vegetables	paraquat	0.07
Root and tuber vegetables	paraquat	0.05
Taro	dithiocarbamates <sup>(3)</sup>	0.1
	metalaxyl or metalaxyl M	0.5
Peppers Chili	chlorpyrifos	3
	carbaryl	0.5
	carbendazim / benomyl	2
	carbosulfan	0.5
	carbosulfan / carbofuran <sup>(2)</sup>	0.5
	cypermethrin	2
	deltamethrin	0.1
	dithiocarbamates <sup>(3)</sup>	2
	prothiofos	3
	profenofos	3
	phosalone	0.5
	malathion	0.1
	methomyl	1
	lambda-cyhalothrin	0.3
	abamectin	0.01
	ethion	3
Peppers, black; white or green	metalaxyl or metalaxyl M	0.05
Peppers, Sweet	chlorpyrifos	2
	carbaryl	5
	dithiocarbamates <sup>(3)</sup>	1
	profenofos	0.5
	phosalone	0.5
	lambda-cyhalothrin	0.3
	abamectin	0.02
Peppers Chili, dried	chlorpyrifos	20
	carbaryl	2
	carbendazim/benomyl	20
	carbosulfan	5
	carbosulfan / carbofuran <sup>(2)</sup>	2

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Peppers Chili, dried	cypermethrin	10
	deltamethrin	1
	dithiocarbamates <sup>(3)</sup>	10
	prothiofos	20
	profenofos	20
	phosalone	4
	malathion	1
	methomyl	10
	lambda-cyhalothrin	3
	abamectin	0.2
	ethion	20
Betel leaves	metalaxyl or metalaxyl M	0.05
Fruiting vegetables, Cucurbits including watermelon immature	methomyl	0.1
Jujube	triazophos	0.03
Pumpkins	dithiocarbamates <sup>(3)</sup>	0.2
	metalaxyl or metalaxyl M	0.2
Wax gourd	metalaxyl or metalaxyl M	0.2
Egg plant, except tomato	carbosulfan	0.03
	carbosulfan / carbofuran <sup>(2)</sup>	0.1
	cypermethrin	0.03
	phosalone	0.5
	methomyl	0.2
	lambda-cyhalothrin	0.3
	ethion	0.3
Tomato	chlorothalonil	5
	carbendazim / benomyl	0.5
	carbosulfan	0.5
	cypermethrin	0.2
	deltamethrin	0.3
	dicofol	1
	dithiocarbamates <sup>(3)</sup>	2
	dimethoate	2
	paraquat	0.05
	profenofos	10
	fenvalerate	1
	phosalone	0.5
	malathion	0.5
	metalaxyl or metalaxyl M	0.2
	methomyl	1
	lambda-cyhalothrin	0.3
	ethion	0.3
Thai egg plant	abamectin	0.02
Lime	dithiocarbamates <sup>(3)</sup>	2
	profenofos	0.05
	methomyl	1
	abamectin	0.01
	ethion	1
Coconut	chlorpyrifos	0.05
	carbaryl	1
	carbosulfan	0.2
	carbosulfan / carbofuran <sup>(2)</sup>	0.02

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Mango	carbaryl	1
	carbendazim / benomyl	2
	captan	5
	cypermethrin	0.7
	deltamethrin	0.2
	dithiocarbamates <sup>(3)</sup>	2
	profenofos	0.2
	fenvalerate	1.5
	lambda-cyhalothrin	0.2
	ethephon	2
Papaya	cypermethrin	0.5
Mangosteen	carbaryl	1
	profenofos	10
	phosalone	1
Sweet potato	chlorpyrifos	0.05
	carbosulfan	0.05
Potato	chlorothalonil	0.2
	carbaryl	0.2
	carbosulfan	0.05
	dithiocarbamates <sup>(3)</sup>	0.2
	paraquat	0.05
	prothiofos	0.05
	famoxadone	0.02
	fenvalerate	0.05
	metalaxyl or metalaxyl M	0.05
	methomyl	0.02
Casava	carbosulfan /carbofuran <sup>(2)</sup>	0.02
	malathion	0.5
	omethoate	0.02
Coffee beans	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	1
	diazinon	0.2
	triazophos	0.05
	fenitrothion	0.05
	acephate	0.05
	ametryn	0.05
omethoate	0.05	
Cacao beans	carbaryl	0.02
	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.05
	triazophos	0.05
	pirimiphos-methyl	0.05
	lambda-cyhalothrin	0.02
	acephate	0.05
Sesame seed	carbosulfan	0.2
	carbosulfan /carbofuran <sup>(2)</sup>	0.1
	triazophos	0.05
	methomyl	0.2
	lambda-cyhalothrin	0.2
Peanut	chlorpyrifos	0.05
	chlorothalonil	0.1
	carbaryl	2
	carbendazim / benomyl	0.1

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Peanut	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.1
	captan	5
	dithiocarbamates <sup>(3)</sup>	0.1
	triazophos	0.05
	prothiofos	0.05
	fenvalerate	0.1
	methomyl	0.1
	acephate	0.2
Sunflower seed	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.05
	triazophos	0.05
Kapok seed	pirimiphos-methyl	0.1
	lambda-cyhalothrin	0.02
Cotton seed	carbendazim / benomyl	0.1
	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.1
	captan	5
	cypermethrin	0.1
	deltamethrin	0.05
	dimethoate	0.05
	diazinon	0.1
	buprofezin	0.35
	paraquat	2
	profenofos	3
	fipronil	0.01
	fenvalerate	0.2
	phosalone	1
	methomyl	0.2
	lambda-cyhalothrin	0.02
	acephate	2
abamectin	0.01	
omethoate	0.05	
Cashew nut	carbaryl	1
	deltamethrin	0.02
	pirimiphos-methyl	0.1
Linseed	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.1
Longan	chlorpyrifos	0.5
	carbaryl	1
	cypermethrin	1
	fenvalerate	1
	lambda-cyhalothrin	0.5
Litchi	chlorpyrifos	2
	carbaryl	1
	cypermethrin	2
	fenvalerate	1
	lambda-cyhalothrin	0.5
Strawberry	paraquat	0.01
Citrus fruits	carbaryl	7
	carbosulfan	0.1

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Citrus fruits	carbosulfan /carbofuran <sup>(2)</sup>	0.02
	dichlorvos	0.2
	dithiocarbamates <sup>(3)</sup>	2
	dimethoate	5
	paraquat	0.02
	phosalone	1
	malathion	7
	metalaxyl or metalaxyl M	5
	methidation	0.5
	methomyl	1
	abamectin	0.01
Citrus fruits, except pummelo	profenofos	0.1
Citrus fruits, except pummelo and grapefruit	cypermethrin	0.3
Mandarins	imidacloprid	1
	ethion	2
Pummelo	cypermethrin	0.5
	profenofos	2
	malathion	0.2
	ethion	1
Pineapple	2,4-D	0.05
	metalaxyl or metalaxyl M	0.1
	atrazine	0.1
	ametryn	0.05
	ethephon	2
Asparagus	carbendazim / benomyl	0.2
	carbosulfan	0.02
	carbosulfan /carbofuran <sup>(2)</sup>	0.06
	cypermethrin	0.4
	deltamethrin	0.1
	dithiocarbamates <sup>(3)</sup>	0.1
	phosalone	0.5
	methomyl	2
	lambda-cyhalothrin	0.02
Shallot	chlorpyrifos	0.2
	carbendazim / benomyl	3
	cypermethrin	0.1
	deltamethrin	0.1
	dithiocarbamates <sup>(3)</sup>	0.5
	dimethoate	0.05
	triazophos	0.05
	profenofos	0.05
	phosalone	0.5
	malathion	1
	methomyl	0.2
Onion, Bulb	chlorpyrifos	0.2
	carbendazim / benomyl	2
	cypermethrin	0.01
	deltamethrin	0.05
	dithiocarbamates <sup>(3)</sup>	0.5
	dimethoate	0.05

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Onion, Bulb	triazophos	0.05
	tebuconazole	0.1
	profenofos	0.05
	phosalone	0.5
	malathion	1
	metalaxyl or metalaxyl M	2
	methomyl	0.2
Sweet basil	fipronil	0.2
	lambda-cyhalothrin	0.5
Grapes	carbaryl	5
	carbendazim / benomyl	3
	carbosulfan	0.1
	carbosulfan /carbofuran <sup>(2)</sup>	0.02
	captan	10
	dithiocarbamates <sup>(3)</sup>	2
	triazophos	0.02
	paraquat	0.01
	profenofos	0.05
	metalaxyl or metalaxyl M	1
	methidation	0.2
	methomyl	0.3
	abamectin	0.01
	ethephon	1
Sugar cane	carbaryl	0.05
	carbendazim / benomyl	0.1
	carbosulfan /carbofuran <sup>(2)</sup>	0.1
	cypermethrin	0.2
	deltamethrin	0.05
	malathion	0.02
	atrazine	0.1
	ametryn	0.05
Apple	methomyl	0.3
	ethephon	1
Eggs	2,4-D	0.01
	chlorpyrifos	0.01
	carbaryl	0.05
	carbendazim / benomyl	0.05
	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.05
	deltamethrin	0.02
	dicofol	0.05
	dithiocarbamates <sup>(3)</sup>	0.05
	dimethoate	0.05
	diazinon	0.02
	paraquat	0.005
	pirimiphos-methyl	0.01
	profenofos	0.02
	fenitrothion	0.05
	methidation	0.02
methomyl	0.02	
acephate	0.01	

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Eggs	abamectin	0.01
	ethephon	0.2
Edible offal of goat and sheep	chlorpyrifos	0.01
	deltamethrin	0.03
Cattle, edible offal of	chlorpyrifos	0.01
	deltamethrin	0.03
	dicofol	1
Poultry, edible offal of	2,4-D	0.05
	chlorpyrifos	0.01
	carbendazim / benomyl	0.1
	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.05
	deltamethrin	0.02
	dicofol	0.05
	dithiocarbamates <sup>(3)</sup>	0.1
	dimethoate	0.05
	diazinon	0.02
	paraquat	0.005
	pirimiphos-methyl	0.01
	profenofos	0.05
	methidation	0.02
	methomyl	0.02
	acephate	0.01
	abamectin	0.02
ethephon	0.2	
Edible offal (mammalian)	2,4-D	1
	carbaryl	1
	carbendazim / benomyl	0.05
	carbosulfan	0.05
	carbosulfan /carbofuran <sup>(2)</sup>	0.05
	cypermethrin	0.05
	dithiocarbamates <sup>(3)</sup>	0.1
	dimethoate	0.05
	diazinon	0.03
	paraquat	0.05
	pirimiphos-methyl	0.01
	profenofos	0.05
	fenvalerate	0.02
	methidation	0.02
	methomyl	0.02
	acephate	0.05
	abamectin	0.1
	ethephon	0.2
Pig, edible offal of	chlorpyrifos	0.01
	deltamethrin	0.03
Milks	2,4-D	0.01
	chlorpyrifos	0.02
	carbaryl	0.05
	carbendazim / benomyl	0.05
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.05F

Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Milks	deltamethrin	0.05 (fat)
	dichlorvos	0.02
	dicofol	0.1F
	dithiocarbamates <sup>(3)</sup>	0.05
	dimethoate	0.05
	diazinon	0.02 F
	triazophos	0.01
	paraquat	0.005
	pirimiphos-methyl	0.01
	profenofos	0.01
	fenvalerate	0.1 F
	fenitrothion	0.01
	methidation	0.001
	methomyl	0.02
	acephate	0.02
	abamectin	0.005
ethephon	0.05	
Meat of goats and sheep	chlorpyrifos	1 (fat)
	deltamethrin	0.5 (fat)
Cattle meat	deltamethrin	0.5 (fat)
	chlorpyrifos	1 (fat)
	carbendazim / benomyl	0.05
	dicofol	3 (fat)
	triazophos	0.01
Poultry meat	2,4-D	0.05
	chlorpyrifos	0.01(fat)
	carbaryl	0.05
	carbendazim / benomyl	0.05
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.01
	cypermethrin	0.1(fat)
	deltamethrin	0.1 (fat)
	dichlorvos	0.05
	dicofol	0.1 (fat)
	dithiocarbamates <sup>(3)</sup>	0.1
	dimethoate	0.05
	diazinon	0.02
	triazophos	0.01
	paraquat	0.005
	pirimiphos-methyl	0.01
	profenofos	0.05
	fenitrothion	0.05
	methidation	0.02
	methomyl	0.02
acephate	0.01	
abamectin	0.01	
ethephon	0.1	
Meat (from mammals other than marine mammals)	2,4-D	0.2
	carbaryl	0.05
	carbosulfan	0.05
	carbosulfan / carbofuran <sup>(2)</sup>	0.05
	cypermethrin	2 (fat)



Commodity	Pesticide <sup>(1)</sup>	Maximum Residue Limit (MRL) (mg/kg)
Meat (from mammals other than marine mammals)	dichlorvos	0.05
	dithiocarbamates <sup>(3)</sup>	0.05
	dimethoate	0.05
	diazinon	2 (fat)
	paraquat	0.005
	pirimiphos-methyl	0.01
	profenofos	0.05
	fenvalerate	1 (fat)
	fenitrothion	0.05
	methidation	0.02
	methomyl	0.02
	acephate	0.05
	abamectin	0.01
ethephon	0.1	
Pig meat	chlorpyrifos	0.02 (fat)
	deltamethrin	0.5 (fat)
Chicken fats	cypermethrin	0.1
Poultry fats	carbendazim / benomyl	0.05
	deltamethrin	0.1 (fat)
	dimethoate	0.05
Mammalian fats	carbosulfan / carbofuran <sup>(2)</sup>	0.05
	dimethoate	0.05
	abamectin	0.1

#### Explanatory notes

- (1) The MRLs in this Appendix show only pesticides (excluding definition of pesticides). Thus, the reference to the definition of residue can be seen in List 1 of this standard.
- (2) Definition of residue of either carbosulfan or carbofuran is sum of carbofuran and 3-hydroxycarbofuran; expressed as carbofuran.
- (3) Group of dithiocarbamates includes zineb, thiram, propineb, maneb, and mancozeb.