**(Unofficial Translation)**

Ministry of Public Health Notification

Title: Food Containing Pesticide Residues

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It is appropriate to revise the Ministry of Public Health Notification entitled "Food Containing Pesticide Residues"

By virtue of articles 5, 6(2), 6(3) and 6(9) of the Food Act B.E. 2522 (1979), which restricts person rights and liberties in conjunction with articles 29, 33, 41, 43 and 45 of the Constitution of the Kingdom of Thailand, the Minister of Public Health announced as follows:

Clause 1 The Ministry of Public Health Notification of No. 288 B.E. 2548 (2005) entitled: "Food Containing Pesticide Residues" dated 17 January B.E. 2548 (2005) is repealed:

Clause 2 Food Containing Pesticide Residues is prescribed food to have standard.

Clause 3 In this notification,

Pesticide Residue means any specified substance contaminates or remains in food resulting from the use of a pesticide. The term includes any derivatives of a pesticide, such as conversion products, metabolites, reaction products, and impurities considered to be of toxicological significance.

Pesticide 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 veterinary drug.

Maximum Residue Limit (MRL) refers to the maximum concentration of a pesticide residue, resulting from the use of a pesticide. The concentration is expressed in milligrams of pesticide residue per kilogram of the commodity (mg /kg).

Extraneous Maximum Residue Limit (EMRL) refers to the maximum concentration of a pesticide residue, arising from environmental sources (including former agricultural uses and their uses have been nationally banned).

/ Clause 4...

Clause 4 Food Containing Pesticide Residues must comply with standard which shall not be found pesticide residues, except those specified as follows:

(1) Pesticide residues in food shall not exceed the Maximum Residue Limit (MRL) prescribed in the List No. 1 annexed to this Notification.

(2) Pesticide residues in food, categorized as Hazardous Substances Type 4 under the Hazardous Substance Act B.E. 2535 (1992), shall not exceed the Extraneous Maximum Residue Limit (EMRL) prescribed in the List No. 2 annexed to this Notification.

(3) Pesticide residues in food other than (1) and (2) shall not exceed the limits recommended by Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme. However, these limits shall not be applied for the Hazardous Substances Type 4 under the Hazardous Substance Act B.E.2535 (1992).

Clause 5 The Analytical Methods shall be as prescribed in the List No. 3 annexed to this Notification.

Clause 6 This Notification is effective the day after its announcement in the Royal Gazette.

Notified on 14th April 2011.

Signed Jurin Laksanawisit
(Mr.Jurin Laksanawisit)
Minister of Public Health

(Published in the Government Gazette Vol.128, Special Part 59 (Ngor), dated 26th May 2011)

Certified true copy
Varunee Saensupa
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**Note: This English version of the notification is translated to meet the need of the non-Thai speaking people. In case of any discrepancy between the Thai original and the English translation, the original Thai version shall prevail.**

**List No. 1**

**Maximum Residue Limit (MRL)**

Annex to the Ministry of Public Health Notification entitled "Food Containing Pesticide Residues"

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| 1 | **Chlorpyrifos** | Chlorpyrifos | Okra | 0.5 |
| | | | Banana | 2 |
| | | | Rice [1] | 0.1 |
| | | | Spices, seeds [2] | 5 |
| | | | Spices, fruits or berries [3] | 1 |
| | | | Spices, roots or rhizome [4] | 1 |
| | | | Rambutan | 0.5 |
| | | | Peanut | 0.05 |
| | | | Soya bean (dry) | 0.1 |
| | | | Soya bean (immature seeds) | 0.1 |
| | | | Oil Palm | 0.05 |
| | | | Peppers, Chili | 0.5 |
| | | | Peppers, Chili (dried) [5] | 5 |
| | | | Coconut | 0.05 |
| | | | Sweet potato | 0.05 |
| | | | Longan | 1 |
| | | | 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 |
| | | | Goat and Sheep, Edible offal of | 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 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| 2 | **Chlorothalonil** | Chlorothalonil | Peanut | 0.05 |
| | | | Soya bean (dry) | 0.2 |
| | | | Soya bean (immature seeds) | 2 |
| | | | Chinese cabbage | 1 |
| | | | Kale | 4 |
| | | | Tomato | 5 |
| | | | Potato | 0.2 |
| 3 | **Carbaryl** | Carbaryl | Lead tree leaves | 0.02 |
| | | | Sweet corn (corn-on-the-cob) | 0.1 |
| | | | Baby corn | 0.1 |
| | | | Maize | 0.02 |
| | | | Sorghum | 0.5 |
| | | | Rice [1] | 1 |
| | | | Rambutan | 1 |
| | | | Cucumber and other Cucurbits, except Watermelon | 3 |
| | | | Watermelon | 1 |
| | | | Peanut | 2 |
| | | | Durian | 1 |
| | | | Oil Palm | 0.02 |
| | | | Brassica Vegetables | 5 |
| | | | Peppers, Chili | 0.5 |
| | | | Peppers, Chili (dried) [5] | 2 |
| | | | Peppers, Sweet | 5 |
| | | | Coconut | 0.02 |
| | | | Mango | 1 |
| | | | Mangosteen | 1 |
| | | | Potato | 0.2 |
| | | | Cacao beans | 0.02 |
| | | | Cashew nut | 1 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Longan | 1 |
| | | | Litchi | 1 |
| | | | Citrus fruits | 15 |
| | | | Grapes | 5 |
| | | | Sugar cane | 0.02 |
| | | | Meat (from mammals other than marine mammals) | 0.05 |
| | | | Edible offal (Mammalian) | 1 |
| | | | Poultry meat | 0.05 |
| | | | Eggs | 0.5 |
| | | | Milks | 0.05 |
| 4 | **Carbendazim / benomyl** | Sum of carbendazim, benomyl and thiophanate-methyl, expressed as carbendazim | Chives | 3 |
| | | | Rice [1] | 2 |
| | | | Rambutan | 3 |
| | | | Onion, Spring | 3 |
| | | | Mung bean (dry) | 0.5 |
| | | | Peanut | 0.1 |
| | | | Soya bean (dry) | 0.5 |
| | | | Soya bean (immature seeds) | 3 |
| | | | Mulberry leaves | 0.1 |
| | | | Peppers, Chili | 2 |
| | | | Peppers, Chili (dried) [5] | 15 |
| | | | Tomato | 0.5 |
| | | | Mango | 5 |
| | | | Cotton seed | 0.1 |
| | | | Asparagus | 0.2 |
| | | | Shallot | 3 |
| | | | Onion, Bulb | 3 |
| | | | Grapes | 3 |
| | | | Sugar cane | 0.1 |
| | | | Cattle meat | 0.05 |
| | | | Edible offal (Mammalian) | 0.05 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry meat | 0.05 |
| | | | Poultry fat | 0.05 |
| | | | Poultry, Edible offal of | 0.1 |
| | | | Eggs | 0.05 |
| | | | Milks | 0.05 |
| 5 | **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 [1] | 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 |
| | | | Peanut | 0.05 |
| | | | Soya bean (dry) | 0.05 |
| | | | Soya bean (immature seeds) | 0.5 |
| | | | Durian | 0.2 |
| | | | Oil Palm | 0.05 |
| | | | Brassica Vegetables | 0.5 |
| | | | Peppers, Chili | 0.5 |
| | | | Peppers, Chili (dried) [5] | 5 |
| | | | Tomato | 0.5 |
| | | | Thai egg plant | 0.5 |
| | | | Egg plant | 0.5 |
| | | | Coconut | 0.2 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Sweet potato | 0.05 |
| | | | Potato | 0.05 |
| | | | Coffee beans | 0.05 |
| | | | Cacao beans | 0.05 |
| | | | Sesame seed | 0.2 |
| | | | Sunflower seed | 0.05 |
| | | | Cotton seed | 0.05 |
| | | | Linseed | 0.05 |
| | | | Citrus fruits | 0.1 |
| | | | Asparagus | 0.5 |
| | | | 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 | 0.03 |
| 6 | **Carbosulfan** | Sum of carbofuran, 3-hydroxy carbofuran and (conjugated 3-Hydroxycarbofuran), expressed as carbofuran | Okra | 0.5 |
| | | | Lead tree leaves | 0.2 |
| | | | Rambutan | 0.1 |
| | | | Garden pea (young pods) | 0.2 |
| | | | Durian | 0.1 |
| | | | Oil Palm | 0.1 |
| | | | Brassica Vegetables | 0.2 |
| | | | Peppers, Chili | 0.5 |
| | | | Peppers, Chili (dried) [5] | 5 |
| | | | Thai egg plant | 0.5 |
| | | | Egg plant | 0.5 |
| | | | Coconut | 0.1 |
| | | | Sweet potato | 0.2 |
| | | | Potato | 0.1 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Cacao beans | 0.05 |
| | | | Sesame seed | 0.1 |
| | | | Sunflower seed | 0.05 |
| | | | Linseed | 0.1 |
| | | | Citrus fruits | 0.1 |
| | | | Asparagus | 0.5 |
| | | | Grapes | 0.1 |
| 7 | **Carbofuran** | Sum of carbofuran, 3-hydroxycarbofuran, and conjugated 3-Hydroxycarbofuran expressed as carbofuran | Banana | 0.1 |
| | | | Sweet corn (corn-on-the-cob) | 0.1 |
| | | | Baby corn | 0.1 |
| | | | Maize | 0.05 |
| | | | Sorghum | 0.1 |
| | | | Rice [1] | 0.1 |
| | | | Cucumber and other Cucurbits, except Watermelon | 0.3 |
| | | | Watermelon | 0.1 |
| | | | Mung bean (dry) | 0.2 |
| | | | Yard-long bean (pods) | 0.1 |
| | | | Peanut | 0.1 |
| | | | Soya bean (dry) | 0.2 |
| | | | Soya bean (immature seeds) | 0.5 |
| | | | Pepper, Black and White | 1 |
| | | | Tomato | 0.1 |
| | | | Cassava | 0.2 |
| | | | Coffee beans | 1 |
| | | | Cotton seed | 0.1 |
| | | | Sugar cane | 0.1 |
| | | | Meat (from mammals other than marine mammals) | 0.05 |
| | | | Edible offal (Mammalian) | 0.05 |
| | | | Poultry meat | 0.08 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry, Edible offal of | 0.08 |
| | | | Eggs | 0.1 |
| | | | Milks | 0.05 |
| 8 | **Captan** | Captan | Barley | 0.1 |
| | | | Peanut | 5 |
| | | | Soya bean (dry) | 5 |
| | | | Soya bean (immature seeds) | 5 |
| | | | Oil Palm | 5 |
| | | | Mango | 5 |
| | | | Cotton seed | 5 |
| | | | Grapes | 10 |
| 9 | **Quintozene** | Quintozene | Spices, seeds [2] | 0.1 |
| | | | Spices, fruits or berries [3] | 0.02 |
| | | | Spices, roots or rhizome [4] | 2 |
| 10 | **Cypermethrin** | Cypermethrin | Okra | 0.5 |
| | | | Sweet corn (corn-on-the-cob) | 0.05 |
| | | | Baby corn | 0.05 |
| | | | Maize | 0.05 |
| | | | Spices, fruits or berries [3] | 0.1 |
| | | | Spices, roots or rhizome [4] | 0.2 |
| | | | Yard-long bean (pods) | 0.05 |
| | | | Garden pea (young pods) | 0.05 |
| | | | Soya bean (dry) | 0.05 |
| | | | Soya bean (immature seeds) | 5 |
| | | | Durian | 1 |
| | | | Brassica Vegetables | 1 |
| | | | Peppers, Chili | 1 |
| | | | Peppers, Chili (dried) [5] | 5 |
| | | | Tomato | 0.5 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Eggplant, Thai eggplant and other eggplant-type commodities; except Tomato | 0.2 |
| | | | Mango | 0.5 |
| | | | Cotton seed | 0.2 |
| | | | Longan | 1 |
| | | | Litchi | 0.5 |
| | | | Citrus fruits | 2 |
| | | | Asparagus | 0.5 |
| | | | Shallot | 0.1 |
| | | | Onion, Bulb | 0.1 |
| | | | Sugar cane | 0.05 |
| | | | Meat (from mammals other than marine mammals) | 0.2 (fat) |
| | | | Edible offal (Mammalian) | 0.05 |
| | | | Poultry meat | 0.05 |
| | | | Poultry, Edible offal of | 0.05 |
| | | | Eggs | 0.05 |
| | | | Milks | 0.05 F |
| **11** | **2, 4- D** | Sum of 2,4-D and its salts 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 [1] | 0.1 |
| | | | Spring Onion | 0.05 |
| | | | Pineapple | 0.05 |
| | | | Meat (from mammals other than marine mammals) | 0.2 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Edible offal (Mammalian) | 1 |
| | | | Poultry meat | 0.05 |
| | | | Poultry, Edible offal of | 0.05 |
| | | | Eggs | 0.01 |
| | | | Milks | 0.01 |
| 12 | **Deltamethrin** | Sum of deltamethrin alpha-R and trans- deltamethrin (fat soluble) | Garlic | 0.1 |
| | | | Baby corn | 0.05 |
| | | | Maize | 1 |
| | | | Sweet corn (corn-on-the-cob) | 0.05 |
| | | | Spring Onion | 0.5 |
| | | | Yard-long bean (pods) | 0.2 |
| | | | Oil Palm | 0.05 |
| | | | Pak-choi | 0.5 |
| | | | Chinese cabbage | 0.5 |
| | | | Kale | 0.5 |
| | | | Brassica Vegetables; except Chinese Cabbages, Pak-choi and Kale | 0.1 |
| | | | Peppers, Chili | 0.5 |
| | | | Peppers, Chili (dried)[5] | 5 |
| | | | Tomato | 0.3 |
| | | | Mango | 0.5 |
| | | | Cotton seed | 0.05 |
| | | | Cashew nut | 0.02 |
| | | | Asparagus | 0.5 |
| | | | Shallot | 0.1 |
| | | | Onion, Bulb | 0.05 |
| | | | Sugar cane | 0.05 |
| | | | Cattle meat | 0.5 (fat) |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Meat of goats 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 fat | 0.1 (fat) |
| | | | Eggs | 0.02 |
| | | | Milks | 0.05 F |
| 13 | **Dichlorvos** | Dichlorvos | Spices, entire group [6] | 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 |
| 14 | **Dicofol** | **Plant commodities :** Dicofol (Sum of o,p' & p,p'- isomers) (fat soluble) | Spices, seeds [2] | 0.05 |
| | | | Spices, fruits or berries [3] | 0.1 |
| | | | Spices, roots or rhizome [4] | 0.1 |
| | | | Cucumber | 0.5 |
| | | | Mung bean (dry) | 0.1 |
| | | **Animal commodities :** Sum of dicofol and 2,2- dichloro-1, 1- bis(4- chlorophenyl) | Soya bean (dry) | 0.05 |
| | | | Tomato | 1 |
| | | | Cattle meat | 3 (fat) |
| | | | Cattle, Edible offal of | 1 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | Ethanol (p,p' - FW 152), expressed as dicofol (fat soluble) | Poultry meat | 0.1 (fat) |
| | | | Poultry, Edible offal of | 0.05 |
| | | | Eggs | 0.05 |
| | | | Milks | 0.1 F |
| 15 | **Groups of dithiocarbamates: zineb, thiram, propineb, maneb, and mancozeb** | Total dithiocarbamates, determined and expresses as CS2 | Okra | 0.2 |
| | | | Garlic | 0.5 |
| | | | Rice [1] | 0.05 |
| | | | Rambutan | 4 |
| | | | Spring Onion | 10 |
| | | | Cucumber | 2 |
| | | | Melon except Watermelon | 0.5 |
| | | | Watermelon | 1 |
| | | | Peanut | 0.1 |
| | | | Soya bean (dry) | 0.06 |
| | | | Soya bean (immature seeds) | 0.2 |
| | | | Durian | 5 |
| | | | Oil Palm | 0.1 |
| | | | Chinese cabbage | 5 |
| | | | Kale | 15 |
| | | | Fruiting Vegetables-Cucurbits; except Cucumber, Melons, Watermelon and Pumpkins | 1 |
| | | | Water spinach (KangKuag) | 0.3 |
| | | | Taro | 0.1 |
| | | | Peppers, Chili | 2 |
| | | | Peppers, Sweet | 1 |
| | | | Pumpkins | 0.2 |
| | | | Tomato | 2 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Lime | 2 |
| | | | Mango | 2 |
| | | | Potato | 0.2 |
| | | | 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 |
| 16 | **Dimethoate** | Dimethoate | Sorghum | 0.01 |
| | | | Spices, seeds [2] | 5 |
| | | | Spices, fruits or berries [3] | 0.5 |
| | | | Spices, roots or rhizome [4] | 0.1 |
| | | | Cucumber and other Cucurbits, except Watermelon | 1 |
| | | | Yard-long bean (pods) | 1 |
| | | | Beans (dry) | 0.1 |
| | | | Tomato | 2 |
| | | | Cotton seed | 0.05 |
| | | | Citrus fruits | 5 |
| | | | Shallot | 0.05 |
| | | | Onion, Bulb | 0.05 |
| | | | Meat (from mammals other than marine mammals) | 0.05 |
| | | | Fat (Mammalian) | 0.05 |
| | | | Edible offal (Mammalian) | 0.05 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry meat | 0.05 |
| | | | Poultry fat | 0.05 |
| | | | Poultry, Edible offal of | 0.05 |
| | | | Eggs | 0.05 |
| | | | Milks | 0.05 |
| 17 | **Diazinon** | Diazinon | Sweet corn (corn-on-the-cob) | 0.02 |
| | | | Baby corn | 0.02 |
| | | | Maize | 0.02 |
| | | | Sorghum | 0.02 |
| | | | Spices, seeds [2] | 5 |
| | | | Spices, fruits or berries [3] | 0.1 |
| | | | Teas | 0.1 |
| | | | Chinese cabbage | 0.05 |
| | | | Kale | 0.05 |
| | | | Brassica Vegetables, except Chinese cabbage and Kale | 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 |
| 18 | **Triazophos** | Triazophos | Garlic | 0.05 |
| | | | Sorghum | 0.05 |
| | | | Mung bean (dry) | 0.2 |
| | | | Peanut | 0.05 |
| | | | Soya bean (dry) | 0.05 |
| | | | Soya bean (immature seeds) | 0.2 |
| | | | Jujube | 0.2 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Coffee beans | 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 |
| 19 | **Permethrin** | Permethrin | Spices, entire group [6] | 0.05 |
| 20 | **Paraquat** | Paraquat cation | Sweet corn (corn-on-the-cob) | 0.05 |
| | | | Baby corn | 0.05 |
| | | | Maize | 0.1 |
| | | | Sorghum | 0.03 |
| | | | Rice [1] | 0.1 |
| | | | Cucumber and other cucurbits | 0.02 |
| | | | Beans (dry) | 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 | 0.2 |
| | | | Cotton seed | 0.2 |
| | | | Strawberry | 0.01 |
| | | | Citrus fruits | 0.02 |
| | | | Grapes | 0.01 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | 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 |
| 21 | **Pirimiphos-Methyl** | Pirimiphos-Methyl | Sweet corn (corn-on-the-cob) | 1 |
| | | | Baby corn | 1 |
| | | | Maize | 1 |
| | | | Rice [1] | 7 |
| | | | Spices, seeds [2] | 3 |
| | | | Spices, fruits or berries [3] | 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 |
| 22 | **Prothiofos** | Prothiofos | Mung bean (dry) | 0.05 |
| | | | Peanut | 0.05 |
| | | | Peppers, Chili | 3 |
| | | | Potato | 0.05 |
| 23 | **Profenofos** | Profenofos | Cabbages, Head | 1 |
| | | | Rose apple | 0.05 |
| | | | Onion, Spring | 0.05 |
| | | | Soya bean (dry) | 0.05 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Durian | 0.05 |
| | | | Cotton seed oil | 0.05 |
| | | | Brassica Vegetables except Cabbages, Head | 0.5 |
| | | | Peppers, Chili | 5 |
| | | | Peppers, Sweet | 0.5 |
| | | | Peppers, Chili (dried)[5] | 35 |
| | | | Tomato | 2 |
| | | | Lime | 0.05 |
| | | | Mango | 0.2 |
| | | | Mangosteen | 5 |
| | | | Cotton seed | 2 |
| | | | Citrus fruits | 0.1 |
| | | | 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 |
| 24 | **Fenvalerate** | Fenvalerate | Cabbages, Head | 3 |
| | | | Sweet corn (corn-on-the-cob) | 0.1 |
| | | | Baby corn | 0.1 |
| | | | Yard-long bean (pods) | 1 |
| | | | Peanut | 0.1 |
| | | | Soya bean (dry) | 0.1 |
| | | | Oil Palm | 0.5 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Chinese cabbage | 1 |
| | | | Kale | 10 |
| | | | Brassica Vegetables, except Chinese cabbage and Kale | 2 |
| | | | Tomato | 1 |
| | | | Mango | 1 |
| | | | Potato | 0.05 |
| | | | Cotton seed | 0.2 |
| | | | Longan | 1 |
| | | | Litchi | 1 |
| | | | Meat (from mammals other than marine mammals) | 1 (fat) |
| | | | Edible offal (Mammalian) | 0.02 |
| | | | Milks | 0.1 F |
| 25 | **Fenitrothion** | Fenitrothion | Sweet corn (corn-on-the-cob) | 1 |
| | | | Baby corn | 1 |
| | | | Maize | 1 |
| | | | Rice [1] | 1 |
| | | | Spices, seeds [2] | 7 |
| | | | Spices, fruits or berries [3] | 1 |
| | | | Spices, roots or rhizome [4] | 0.1 |
| | | | Teas | 0.5 |
| | | | Soya bean (dry) | 0.5 |
| | | | Soya bean (immature seeds) | 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 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| 26 | **Phosalone** | Phosalone | Spices, seeds [2] | 2 |
| | | | Spices, fruits or berries [3] | 2 |
| | | | Spices, roots or rhizome [4] | 3 |
| | | | Spring Onion | 1 |
| | | | Yard-long bean (pods) | 1 |
| | | | Garden pea (young pods) | 1 |
| | | | Soya bean (dry) | 0.05 |
| | | | Soya bean (immature seeds) | 0.5 |
| | | | Durian | 1 |
| | | | Mulberry leaves | 0.1 |
| | | | Brassica Vegetables | 1 |
| | | | Peppers, Chili | 1 |
| | | | Peppers, Sweet | 1 |
| | | | Peppers, Chili (dried) [5] | 7 |
| | | | Tomato | 1 |
| | | | Thai egg plant | 1 |
| | | | Egg plant | 0.5 |
| | | | Mangosteen | 1 |
| | | | Cotton seed | 1 |
| | | | Citrus fruits | 1 |
| | | | Asparagus | 0.5 |
| | | | Shallot | 1 |
| | | | Onion, Bulb | 1 |
| 27 | **Folpet** | Folpet | Rambutan | 0.1 |
| 28 | **Phenthoate** | Phenthoate | Spices, seeds [2] | 7 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| 29 | **Malathion** | Malathion | Cabbages, Head | 8 |
| | | | Sweet corn (corn-on-the-cob) | 0.02 |
| | | | Baby corn | 0.02 |
| | | | Maize | 0.05 |
| | | | Sorghum | 3 |
| | | | Spices, seeds[2] | 2 |
| | | | Spices, fruits or berries[3] | 1 |
| | | | Spices, roots or rhizome[4] | 0.5 |
| | | | Cauliflower | 0.5 |
| | | | Spring Onion | 5 |
| | | | Broccoli | 5 |
| | | | Chinese cabbage | 8 |
| | | | Kale | 3 |
| | | | Peppers, Chili | 0.1 |
| | | | Peppers, Chili (dried)[5] | 1 |
| | | | Tomato | 0.5 |
| | | | Cassava | 0.5 |
| | | | Citrus fruits | 7 |
| | | | Shallot | 1 |
| | | | Onion, Bulb | 1 |
| | | | Sugar cane | 0.01 |
| 30 | **Metalaxyl** | Metalaxyl | Sweet corn (corn-on-the-cob) | 0.05 |
| | | | Baby corn | 0.05 |
| | | | Maize | 0.05 |
| | | | Spices, seeds[2] | 5 |
| | | | Cucumber | 0.5 |
| | | | Melon except Watermelon | 0.2 |
| | | | Watermelon | 0.2 |
| | | | Durian | 1 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Angled loofah | 0.2 |
| | | | Kale | 2 |
| | | | Water spinach (KangKuag) | 2 |
| | | | Taro | 0.5 |
| | | | Pepper, Black and White | 0.05 |
| | | | Betel leaves | 0.05 |
| | | | Pumpkins | 2 |
| | | | Wax gourd | 0.2 |
| | | | Potato | 0.05 |
| | | | Citrus fruits | 5 |
| | | | Pineapple | 1 |
| | | | Onion, Bulb | 2 |
| | | | Grapes | 1 |
| 31 | **Methidathion** | Methidathion | Rambutan | 0.5 |
| | | | Durian | 0.5 |
| | | | Custard apple | 0.5 |
| | | | 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 |
| | | | Poultry, Edible offal of | 0.02 |
| | | | Eggs | 0.02 |
| | | | Milks | 0.001 |
| 32 | **Methomyl** | Sum of methomyl and thiodicarb, expressed as methomyl | Okra | 2 |
| | | | Sweet corn (corn-on-the-cob) | 0.1 |
| | | | Baby corn | 0.1 |
| | | | Maize | 0.02 |
| | | | Sorghum | 0.2 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Cucumber and other Cucurbits, except Watermelon | 0.2 |
| | | | Watermelon | 0.2 |
| | | | Mung bean (dry) | 0.05 |
| | | | Yard-long bean (pods) | 1 |
| | | | Peanut | 0.1 |
| | | | Soya bean (dry) | 0.2 |
| | | | Soya bean (immature seeds) | 0.1 |
| | | | Soya bean oil | 0.2 |
| | | | Cotton seed oil | 0.04 |
| | | | Pear | 0.2 |
| | | | Peppers, Chili | 0.7 |
| | | | Peppers, Chili (dried)[5] | 5 |
| | | | Tomato | 0.5 |
| | | | Eggplant, Thai eggplant and other eggplant-type commodities; except Tomato | 0.2 |
| | | | Lime | 1 |
| | | | Potato | 0.02 |
| | | | Sesame seed | 0.2 |
| | | | Cotton seed | 0.2 |
| | | | Citrus fruits | 1 |
| | | | Asparagus | 2 |
| | | | Shallot | 0.2 |
| | | | Onion, Bulb | 0.2 |
| | | | Grapes | 1 |
| | | | Apple | 0.2 |
| | | | Meat (from mammals other than marine mammals) | 0.02 |
| | | | Edible offal (Mammalian) | 0.02 |
| | | | Poultry meat | 0.02 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry, Edible offal of | 0.02 |
| | | | Eggs | 0.02 |
| | | | Milks | 0.02 |
| 33 | **Lambda-cyhalothrin** | Lambda-cyhalothrin | Okra | 0.2 |
| | | | Sorghum | 0.2 |
| | | | Rambutan | 0.5 |
| | | | Mung bean (dry) | 0.2 |
| | | | Soya bean (dry) | 0.2 |
| | | | Soya bean (immature seeds) | 0.2 |
| | | | Durian | 0.5 |
| | | | Oil Palm | 0.02 |
| | | | Brassica Vegetables | 0.2 |
| | | | Mango | 0.1 |
| | | | 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 |
| 34 | **Acephate** | Acephate | Spices, entire group [6] | 0.2 |
| | | | Mung bean (dry) | 0.02 |
| | | | Peanut | 0.02 |
| | | | Coffee beans | 0.02 |
| | | | Cacao beans | 0.02 |
| | | | Cotton seed | 2 |
| | | | Meat (from mammals other than marine mammals) | 0.05 |
| | | | Edible offal (Mammalian) | 0.05 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry meat | 0.01 |
| | | | Poultry, Edible offal of | 0.01 |
| | | | Eggs | 0.01 |
| | | | Milks | 0.02 |
| 35 | **Atrazine** | Atrazine | Sweet corn (corn-on-the-cob) | 0.1 |
| | | | Baby corn | 0.1 |
| | | | Maize | 0.1 |
| | | | Pineapple | 0.1 |
| | | | Sugar cane | 0.1 |
| 36 | **Abamectin** | Abamectin | Watermelon | 0.01 |
| | | | Yard-long bean (pods) | 0.01 |
| | | | Garden pea (young pods) | 0.01 |
| | | | Pak-choi | 0.01 |
| | | | Kale | 0.01 |
| | | | Brassica Vegetables | 0.01 |
| | | | Peppers, Chili | 0.02 |
| | | | Peppers, Sweet | 0.02 |
| | | | Peppers, Chili (dried)[5] | 0.2 |
| | | | Thai egg plant | 0.02 |
| | | | Lime | 0.01 |
| | | | Cotton seed | 0.01 |
| | | | Citrus fruits | 0.01 |
| | | | Meat (from mammals other than marine mammals) | 0.01 |
| | | | Fat (Mammalian) | 0.1 |
| | | | Edible offal (Mammalian) | 0.1 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Poultry meat | 0.01 |
| | | | Poultry, Edible offal of | 0.02 |
| | | | Eggs | 0.01 |
| | | | Milks | 0.005 |
| 37 | **Ametryn** | Ametryn | Teas | 0.05 |
| | | | Coffee beans | 0.05 |
| | | | Pineapple | 0.05 |
| | | | Sugar cane | 0.2 |
| 38 | **Ethephon** | Ethephon | Banana | 2 |
| | | | Cherries | 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 |
| 39 | **Ethion** | Ethion | Spices, seeds [2] | 3 |
| | | | Spices, fruits or berries [3] | 5 |
| | | | Spices, roots or rhizome [4] | 0.3 |

| No. | Pesticides | Residue definition | Commodities | Maximum Residue Limit (MRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) |
|---|---|---|---|---|
| | | | Cucumber and other Cucurbits, except Watermelon | 0.3 |
| | | | Beans (dry) | 1 |
| | | | Beans and Peas (green pods and immature seeds) | 1 |
| | | | Peppers, Chili | 3 |
| | | | Peppers, Chili (dried)[5] | 20 |
| | | | Tomato | 0.3 |
| | | | Eggplant, Thai eggplant and other eggplant-type commodities; except Tomato | 0.3 |
| | | | Lime | 1 |
| | | | Citrus fruits | 1 |
| 40 | **Iprodion** | Iprodion | Spices, seeds[2] | 0.05 |
| | | | Spices, roots or rhizome[4] | 0.1 |
| 41 | **Omethoate** | Omethoate | Lead tree leaves | 0.01 |
| | | | Mung bean (dry) | 0.05 |
| | | | Soya bean (dry) | 0.05 |
| | | | Cassava | 0.05 |
| | | | Coffee beans | 0.01 |
| | | | Cotton seed | 0.05 |

**List No. 2**

**Extraneous Maximum Residue Limit (EMRL)**

Annex to the Ministry of Public Health Notification entitled "Food Containing Pesticide Residues"

| Commodities | Extraneous Maximum Residue (EMRL) (milligrams of pesticide residue per 1 kilogram of the commodity, mg /kg) | | | | |
|---|---|---|---|---|---|
| | Aldrin[7] and dieldrin | Chlordane[8] | DDT[9] | Endrin[10] | Heptachlor[11] |
| - Cereal grains | 0.02 | 0.02 | 0.1 | 0.01 | 0.02 |
| - Fruits | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 |
| - Vegetables, Herbs and Spices | - | 0.02 | - | - | 0.05 |
| - Vegetables, Herbs and Spices; except Cucurbits and Root and tuber vegetables | 0.05 | - | - | - | - |
| - Vegetables, Herbs and Spices; except Cucurbits | - | - | - | 0.01 | - |
| - Vegetables, Herbs and Spices; except Carrot | - | - | 0.01 | - | - |
| - Fruiting vegetables, Cucurbits | 0.1 | - | - | 0.05 | - |
| - Root and tuber vegetables | 0.1 | - | - | - | - |
| - Carrot | - | - | 0.2 | - | - |
| - Plants for sugar | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 |
| - Plants for beverages | 0.2 | 0.02 | 0.01 | 0.01 | 0.05 |
| - Nuts and Seeds | 0.05 | 0.02 | 0.01 | 0.01 | 0.02 |
| - Pulses and Oil seeds | 0.05 | 0.02 | 0.01 | 0.01 | 0.02 |
| - Vegetable fats and oils | 0.2 | 0.02 | 0.05 | 0.05 | 0.02 |
| - Animal fats and oils | 0.2 | 0.05 | 1 | 0.05 | 0.2 |
| - Mamalian meat and edible offal | 0.2 (fat) | 0.05 (fat) | 5 (fat) | 0.05 (fat) | 0.2 (fat) |
| - Poultry meat and edible offal | 0.2 (fat) | 0.05 (fat) | 0.3 (fat) | 0.1 (fat) | 0.2 (fat) |
| - Meat of aquatic animals, molluscs, and invertebrate animals | 0.2 (fat) | 0.05 (fat) | 1 (fat) | 0.05 (fat) | 0.2 (fat) |
| - Meat of amphibians and reptiles | 0.2 (fat) | 0.05 (fat) | 1 (fat) | 0.05 (fat) | 0.2 (fat) |
| - Eggs | 0.1 | 0.02 | 0.1 | 0.005 | 0.05 |
| - Milks | 0.006 F | 0.002 F | 0.02 F | 0.0008 F | 0.006 F |

## Explanation

**ก.** [1-6]

Rice [1] : in this standard means Rice (*Oryza sativa* Linn.)

Spices, seeds [2] : The commodities in this group include, but not limited to, coriander seed, fennel.

Spices, fruits or berries [3] : The commodities in this group include, but not limited to, pepper (black, white), cardamom, and anise.

Spices, roots or rhizome [4] : The commodities in this group include, but not limited to, ginger, galangal, and turmeric.

Peppers, Chili (dried) [5] : in this standard means dried chili peppers made from chili peppers such as bird chili (*Capsicum frutescens* Linn), chili spur pepper (*Capsicum annnuum* Linn. *Var acuminatum Fingerh*), Green pepper (*Capsicum annnuum* Linn.).

Spices, entire group [6] : 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.

**ข.** [7-11] specify the analytical procedure to express the amount of pesticide residue as follows:

[7] Aldrin and dieldrin shall be the sum of HHDN and HEOD (fat soluble)

[8] Chlordane in plant derived food shall be the sum of cis- and trans- chlordane (fat soluble)

Chlordane in animal derived food shall be the sum of cis- and trans- chlordane and oxychlordane (fat soluble).

[9] DDT shall be the sum of (p, p'-DDT), (o,p'-DDT), (p,p'-DDE) and {p,p'-TDE (DDD)} (fat soluble).

[10] Endrin shall be the sum of endrin and delta-keto-endrin (fat soluble).

[11] Heptachlor shall be the sum of heptachlor and heptachlor epoxide (fat soluble).

**ค.** “F” indicated after the MRL 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 MRL with “F” are as follows:

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

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

**ง.** (fat) indicated after the MRL of meat for fat-soluble pesticide residues means the MRL applied to the fat of meat.

**List No. 3**

**The Analytical Methods for Pesticide Residues in Food Resulting from the use of Hazardous Substances in Agriculture.**

Annex to the Ministry of Public Health Notification entitled "Food Containing Pesticide Residues"

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The analytical methods for pesticide residues in food resulting from the use of hazardous substances in agriculture shall be one of the following:

1. Analytical methods specified in the latest edition of Codex Alimentarius “Analysis of Pesticide Residues: Recommended Methods”, established by Codex Alimentarius Commission, Joint FAO/WHO Food Standard Programme.

2. Analytical methods issued by National Organizations or International Standards Organizations, or published in the manuals or publications which are recognized by the international level.

3. Performance characteristics of pesticide residue analytical methods must be accurate and reliable. Method validation is performed by a collaborative study or single laboratory based on international guidelines. The result shall be in document comply with the latest version of ISO/IEC 17025.

The methods of analysis as stated under items 2 and 3 shall provide the reliable outcome of MRLs/EMRLs.