BHUTAN MANDATORY STANDARD FOR PESTICIDE RESIDUES IN FOOD

1. PREAMBLE

This Technical Regulation is issued pursuant to the Food Rules and Regulations of Bhutan 2017. This Technical Regulation is based mainly on the Codex Maximum Residue Limits (MRLs) for Pesticides in Food Online Database and other relevant documents as applicable to Bhutan.

2. SCOPE

This Technical Regulation applies to Pesticide residues in foods. The pesticide residues in food not mentioned in this list, Codex Maximum Residue Limits (MRLs) for Pesticides in Food Online Database shall apply.

3. DEFINITIONS

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.

Pesticide residue means any specified substances in food, agricultural commodities, or animal feed 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.

Maximum Residue Limit (MRL) means the maximum concentration of a pesticide residue (expressed as mg/kg), recommended by the Codex Alimentarius Commission to be legally permitted in or in food commodities and animal feeds.

4. PESTCIDE RESIDUE LIMITS

Pesticide Maximum Residue limits (MRLs) specified as follows:

The food specified in column (2) of the table below shall not contain the pesticide specified in relation thereto in column (1) in proportion greater than the maximum permitted proportion specified in column (3) thereof in relation to the food.

(1) *Pesticide*	*(2)* *Food*	*(3)* *Maximum Residue Limits (MRLs) in food (mg/kg)*
2,4-D	Rice (milled or polished)	0.05
	Coconut/coconut oil	0.05
	Palm oil	0.05
	Banana	0.1
	Sugarcane	3
Abamectin	Kale	0.05
	Cabbage	0.05
	Chinese cabbage	0.05
	Mustards	0.05
Acephate	Rice (milled or polished)	0.1
	Cocoa beans	0.2
	Citrus fruits	1
	Cauliflower	2
	Celery	5
	Kale	5
	Coconut/coconut oil	0.5
	Cabbage	2
	Mango	1
	Palm oil	0.5
	Lettuce	5
	Mustards	5
	Tomato	1
	Potato	0.5
Acetamiprid	Okra	2
	Long beans	2
	Cabbage	2
	Brinjal	2
	Cucumber	2
Alachlor	Maize	0.1
	Soya bean	0.2

	Groundnuts	0.05
Ametryn	Cocoa beans	0.2
	Coffee beans	0.2
	Citrus fruits	0.1
	Coconut/coconut oil	0.2
	Palm oil	0.2
	Pineapple Banana	0.2 0.2
	Sugarcane	0.1
	Tea	0.2
Amitraz (sum of amitraz calculated as N-(2,4-dimethylphenyl)-N methyl formamidine and N' – methyl-formamidine	Papaya	0.5
	Citrus fruits	0.5
	Chilli	0.2
	Meat (sheep)	0.1
	Meat (cattle, pig)	0.05
	Durian	0.5
	Edible offal (cattle, sheep, pig)	0.2
	French beans	1
	Mango	0.5
	Legume vegetables (except as otherwise listed)	1
	Brinjal	0.5
Anilofos	Rice (milled or polished)	0.1
Atrazine	Maize	0.2
	Pineapple	0.2
	Sugarcane	0.1
Azoxystrobin	Chilli	1
	Cucumber	0.5
	Tomato	1
Bendiocarb (commodities of plant origin: unconjugated bendiocarb)	Chilli	0.2
	Kale	0.2
	Cabbage	0.2
	Chinese cabbage	0.2
	Mustards	0.2
	Legume vegetables	0.2
	Watermelon	0.2
	Brinjal	0.2
	Cucumber	0.2
Bensulfuron-methyl	Rice (milled or polished)	0.02
Bentazone	Rice (milled or polished)	0.1
	Maize	0.2

	Soya bean	0.05
	Groundnuts	0.05
Bispyribac sodium	Rice (milled or polished)	0.05
Bitertanol	Wheat	0.05
	Apple, peach	1.0
	Plum, Prune, Pome	2.0
	Poultry(carcass fat basis)	0.1
	Egg (Shell free basis)	0.1
	Meat (Carcass fat basis)	0.5
	Milk	0.5
	Banana	0.5
BPMC	Rice (milled or polished)	0.2
Bromacil	Pineapple	0.1
Bromopropylate	Chilli	1
	Brinjal	1
Buprofezin	Rice (milled or polished)	0.2
Butachlor	Rice, Potato	0.5
Butocarboxim	Cocoa beans	0.5
	Chilli	2
	Long beans	2
	Palm oil	2
	Tomato	2
Cadusafos	Banana	0.01
	Sugarcane	0.01
Captan	Pome	15
	Plum	10
	Peach	20
	Spices, root, rhizome	0.05
	Potato	0.5
	Coffee beans	10
	Groundnuts	10
	Palm oil	10
	Banana	15
	Strawberries	20
	Tea	10
	Tomato	15
	Legume vegetables (except as otherwise listed)	5
Carbaryl	Brinjal	5
	Cucumber	3
	Asparagus	15
	Beetroot	0.1

	Carrot	0.5
	Citrus fruits	15.0
	Cranberry	5.0
	Brinjal	1.0
	Kidney of cattle, goat, pig, sheep	3.0
	Liver of cattle, goat, pig, sheep	1.0
	Maize	0.5
	Meat	0.5
	Chilli	0.5
	Chilli dried	2.0
	Capsicum	5.0
	Rice	1.0
	Wheat	2.0
	Soya bean	0.2
	Spice fruit, berries	0.8
	Spice root, rhizome	0.1
	Sunflower	0.2
	Tomato	5.0
	Tomato juice	3.0
Carbendazim	Food grains	0.5
Carbofuran	Chilli, dried	20.0
	Citrus fruits	10.0
	Papaya, Guava	3.0
	Mango	2.0
	Banana, orange	1.0
	Plume, Plum	0.5
	Pine apple , Tomato	5.0
	Legume vegetable	2.0
	water melon	2.0
	Cucumber	0.5
	Egg (shell free basis)	0.05
	Meat/Poultry, Carcass fat basis	0.1
	Banana	0.1
	Cattle, pig fat	0.05
	Citrus pulp dry	2.0
	Edible offal	0.05
	Maize	0.5
	Meat	0.05
	Mandarin, Orange	0.5
	Mustard	0.05
	Rice	0.1

	Spice root, rhizome	0.1
	Sugarcane	0.1
	Sunflower	0.1
Carbosulfan	Rice (milled or polished) Chilli	0.2 0.5
	Long beans	0.5
	Watermelon	0.5
	Brinjal	0.5
	Cucumber	0.5
Cartap (expressed as free base)	Rice (milled or polished)	0.1
	Cabbage	0.2
	Chinese cabbage	2
	Lettuce	2
	Mustards	2
Chinomethionat	Chilli	0.5
	Brinjal	0.5
Chlorfenapyr	Cabbage	1
	Chinese cabbage	1
	Brinjal	1
	Cucumber	1
Chlorfluazuron	Okra	0.3
	Chilli	0.3
	Long beans	0.3
	Kale	0.3
	Radish	0.3
	Lettuce	0.3
	Mustards	0.3
	Brinjal	0.3
Chlorimuron ethyl	Rice (milled or polished)	0.02
Chlropyrifos	Food grains, fruits	0.5
	Potato, Onion,	0.01
	Cauliflower, Cabbage,	0.01
	Mushrooms,	0.05
	Other Vegetables	0.2
	Spices, seed	5.0
	Spice fruit, root, berries, rhizome	1.0
	Milk & milk products on fat basis	0.01
	Meat & poultry on Caracas fat basis	0.01
	Poultry, edible offal	0.01
	Egg,	0.01
	Pig meat	0.02
	Broccoli	2.0

	Chill dried	20.0
Cinosulfuron	Rice (milled or polished)	0.1
	Cocoa beans	0.1
	Palm oil	0.1
Clethodim	Onion (bulb)	0.2
	Tomato	0.1
Copper oxychloride	fruits/vegetables	20.0
Coumaphos (sum of coumaphos and its oxygen analogue)	Potato	1.0
	Meat (fat)	0.5
	Milks (fat)	0.02
Cyclosulfamuron	Rice (milled or polished)	0.1
Cycloxydim (sum of 3-thion-3yl-glutaric acid (TME) and 3-hydroxy-3-thiam-3yl glutaric acid (OH-TME), expressed as cycloxydim)	Onion (bulb)	0.5
	Citrus fruits	0.5
	Tomato	0.5
Cyfluthrin	Cocoa beans	0.1
	Citrus fruits	0.5
	Chilli	0.5
	Ginger	0.01
	Legume vegetables	0.5
	Brinjal	0.5
Cypermethrin (sum of isomers)	Okra	0.5
	Papaya	2
	Cocoa beans	0.05
	Fruits	2
	Citrus fruits	2
	Grapes, tomato	0.2
	Chilli	2
	Chilli dried	10.0
	Meat	2.0
	Maize ,wheat, Rice	0.05
	Guava	2
	Green gram	0.05
	Long beans	0.5
	Kale	1
	Cabbage	2
	Cauliflower	2
	Mango	2
	Palm oil	0.5
	Lettuce	2
	Mustards	2

	Leafy vegetables (except as otherwise listed)	2
	Brassica vegetables (except as otherwise listed)	1
	Legume vegetables (except as otherwise listed)	0.5
	Brinjal	0.2
	Milks (fat)	0.05
	Meat	2.0
	Poultry meat	0.1
	Poultry offal	0.05
	Egg	0.01
	Asparagus	0.4
	Citrus fruits	0.3
	Pome fruits	0.7
	Tea, Green, black	0.2
	Tomato	0.5
Cyproconazole	Cocoa beans	0.1
	Coffee beans	0.1
	Palm oil	0.1
	Legume vegetables	0.1
Cyromazine	Sweet pea	2
Diafenthiuron	Cauliflower	0.2
	Chilli	0.2
	Kale	0.2
	Cabbage	0.2
	Chinese cabbage	0.2
	Mustards	0.2
	Legume vegetables	0.2
	Brinjal	0.2
	Cucumber	0.2
Diazinon	Star fruit	0.5
	Okra	0.5
	Food grains	0.05
	Citrus fruits	0.5
	Cauliflower	0.5
	Chilli	0.5
	Guava	0.5
	Rose apple	0.5
	Long beans	0.5
	Kale	0.5
	Cabbage	0.5
	Chinese cabbage	0.5
	Mango	0.5
	Celery	0.5

	Mustards	0.5
	Legume vegetables except as otherwise listed	0.2
	Brinjal	0.5
	Cucumber	0.5
	Tomato	0.5
Dicambra	Palm oil	0.1
Dichlorvos	Mango	0.1
Dicofol (sum of o,p' & p,p' isomers)	Citrus fruits	5
	Chilli	1
	French beans	2
	Long beans	2
	Mango	1
	Tea	40
	Watermelon	0.2
	Cucumber	0.5
	Spice fruit, berry, root, rhizome	0.1
	Spice seed	0.5
	Tomato	1
Difenoconazole	Rice (milled or polished)	0.1
	Cocoa beans	0.1
	Chilli	1
	French beans	1
	Long beans	1
	Mango	1
	Palm oil	0.1
	Banana	0.5
	Mustards	1
	Watermelon	0.1
	Cucumber	1
	Tomato	1
Diflubenzuron	Cabbage	1
Dimethoate (sum of dimethoate and omethoate)	Onion (bulb)	0.2
	Rice (milled or polished)	0.1
	Cocoa beans	0.1
	Coffee beans	0.1
	Citrus fruits ,Cherry	2
	Cauliflower	2
	Chilli	2
	French beans	1
	Long beans	1
	Groundnuts	0.05

	Carrot	1
	Cabbage	2
	Pumpkins	2
	Radish	1
	Mango, Pear	1
	Pineapple	1
	Banana	2
	Lettuce	2
	Brassica vegetables (except as otherwise listed)	2
	Leafy vegetables (except as otherwise listed)	10
	Legume vegetables (except as otherwise listed)	2
	Tea	5
	Watermelon	1
	Potato	0.2
	Cucumber	2
	Tomato	5
Dimethomorph	Muskmelon	0.5
	Cucumber	0.2
	Tomato	0.5
Dithiocarbamates (expressed as CS2)	Onion (bulb)	0.5
	Amaranth	10
Mancozeb	Star fruit	5
Maneb	Rice (milled or polished)	0.5
Propineb	Papaya	5
Thiram	Cocoa beans	5
Zineb	Citrus fruits	10
Ziram	Cauliflower	5
	Chilli	3
	Spring onion leaves	10
	Guava	5
	Sweet pea Long beans	2 2
	Groundnuts	0.1
	Cabbage	5
	Pumpkins	0.2
	Pepper (black, white)	3
	Mango	2
	Melons	0.5
	Palm oil	1
	Banana	2

	Celery	5
	Lettuce	10
	Mustards	10
	Leafy vegetables (except as otherwise listed)	10
	Legume vegetables (except as otherwise listed)	2
	Tea	5
	Watermelon	1
	Cucumber	2
	Tomato	5
	Potato	0.2
Diuron	Papaya	0.5
	Coffee beans	0.1
	Citrus fruits	0.5
	Palm oil	0.1
	Pineapple	0.5
	Banana	0.5
	Sugarcane	0.1
	Tea	1
DSMA	Palm oil	0.1
Emamectin benzoate	Cabbage	0.05
	Chinese cabbage	0.05
	Kale	0.05
	Mustards	0.05
Endosulfan (sum of alpha and beta endosulfan and endosulfan sulphate)	Cocoa beans	0.1
	Fruits	2
	Citrus fruits	2
	Maize	0.1
	Cabbage	2
	Pepper (black, white)	0.5
	Mango	2
	Tea	30
	Brinjal	2
	Cucumber	2
EPTC	Rice (milled or polished)	0.1
Ethoxysulfuron	Rice (milled or polished)	0.01
Etofenprox	Rice (milled or polished)	0.5
Famoxadone	Watermelon	0.5
	Cucumber	0.2
	Tomato	0.2
Fenamiphos	Guava	0.2

(including its sulphoxide and sulphone, expressed as fenamiphos)	Banana	0.1
Fenitrothion	Cereal grains	10
	Rice (milled or polished)	1
Fenoxaprop-p-ethyl	Rice (milled or polished)	0.05
Fenoxycarb	Kale	0.5
	Cabbage	0.2
	Chinese cabbage	0.2
	Mustards	0.5
Fenpyroximate	Citrus fruits	0.5
	Chilli	0.5
Fenthion	Star fruit	2
	Rice (milled or polished)	0.05
	Citrus fruits	2
	Guava	2
	Mango	2
	Cucumber	0.5
Fenvalerate	Vegetables	2
	Meat (carcass fat basis).	1.0
	Milk and milk products)	0.1
	Citrus fruits	2
	Cauliflower	2
	Chilli	1
	Cabbage	3
	Spices fruit berries	0.03
	Lettuce	2
	Mustards	2
	Cucumber	2
	Tomato	5
Fipronil	Rice (milled or polished)	0.01
	Chilli	0.05
	Cabbage	0.05
	Mustards	0.05
	Watermelon	0.01
	Brinjal	0.05
Fluazifop-butyl	Papaya	0.1
	Cocoa beans	0.1
	Durian	0.1
	Guava	0.1
	Mango	0.1
	Palm oil	0.2
	Banana	0.1

	Rambutan	0.1
Flufenacet	Maize	0.1
Flufenoxuron	Cabbage	0.1
Fluroxypyr	Cocoa beans	0.1
	Palm oil	0.1
Flutolanil	Rice (milled or polished)	1
	Durian	0.1
	Mustards	1
Formetanate hydrochloride	Chilli	2
	French beans	2
	Long beans	2
	Watermelon	1
	Brinjal	2
	Cucumber	1
Formothion	Okra	0.1
	Cabbage	0.1
	Root and tuber vegetables	2
	Brinjal	0.1
	Cucumber	0.1
	Tomato	0.1
Fosetyl aluminium	Citrus fruits	5
	Cocoa beans	1
	Durian	1
Furathiocarb	Rice (milled or polished)	0.1
	Citrus fruits	3
	Chilli	2
	Maize	0.05
	Watermelon	0.2
	Brinjal	0.1
Glyphosate	Star fruit	0.1
	Papaya	0.2
	Cocoa beans	0.5
	Coffee beans	0.2
	Citrus fruits	0.2
	Durian	0.1
	Guava	0.1
	Coconut/coconut oil	0.1
	Mango	0.1
	Palm oil	0.1
	Banana	0.2
	Tea	0.2
	Rice (milled or polished)	0.05
	Coffee beans	0.05

	Long beans	0.2
	Mustards	0.5
	Cucumber	0.1
	Sugarcane	0.1
	Citrus fruits	0.5
	Rice (milled or polished)	0.1
	Cocoa beans	0.01
	Palm oil	0.1
	Palm oil	0.05
	Rice (milled or polished)	0.1
	Citrus fruits	0.5
	Chilli	0.1
	Long beans	0.5
	Capsicum	0.1
	Mango	0.5
	Watermelon	0.1
	Brinjal	0.1
	Rice (milled or polished)	10
	Citrus fruits	10
	Chilli	5
	Cabbage	5
	Chinese cabbage	5
	Rock melon	2
	Watermelon	2
	Brinjal	10
	Cucumber	2
	Tomato	5
	Tomato	1
	Rice (milled or polished)	0.05
	Cocoa beans	0.05
	Banana	0.1
	Watermelon	0.05
	Rice (milled or polished)	0.2
	Cocoa beans	0.1
	Coffee beans	0.1
	Rice (milled or polished)	2
	Chilli	0.5
	Maize	0.05
	Long beans	0.2
	Brinjal	0.2
	Rice (milled or polished)	0.1
	Cocoa beans	0.2
	Citrus fruits	5
	Durian	0.2

	Maize	0.05
	Cucumber	0.5
	Tomato	0.5
	Rice (milled or polished)	1
	Fruits	1
	Tuber crops	1
	Lettuce	1
	Strawberries	1
	Cocoa beans	0.1
	Maize	0.1
	Palm oil	0.1
	Sugarcane	0.1
	Tea	0.5
	Amaranth	0.1
	Chili	0.1
	Maize	0.1
	French beans	0.1
	Sweet pea	0.1
	Long beans	0.1
	Soya bean	0.1
	Groundnuts	0.1
	Bitter gourd	0.1
	Lettuce	0.1
	Legume vegetables (except as otherwise listed)	0.1
	Sugarcane	0.1
	Watermelon	0.1
	Cucumber	0.1
	Soya bean	0.05
	Groundnuts	0.05
	Rice (milled or polished)	0.5
	Cocoa beans	0.1
	Coffee beans	0.05
	Coconut/coconut oil	0.1
	Pepper (black, white)	0.05
	Palm oil	0.1
	Banana	0.05
	Root and tuber vegetables (except as otherwise listed)	0.05
	Tapioca	0.05
	Rice (milled or polished)	0.5
	Mustards	1
	Cabbage	0.1
	Mustards	0.1
	Tomato	0.1

	Okra	1
	Cauliflower	0.5
	Cabbage	5
	Brinjal	1
	Tomato	1
	Onion (bulb)	0.1
	Okra	0.1
	Rice (milled or polished)	0.05
	Cauliflower	0.1
	Cabbage	0.1
	Lettuce	0.1
	Legume vegetables	0.1
	Brinjal	0.1
	Cucumber	0.1
	Tomato	0.1
Propanil	Rice (milled or polished)	0.1
Propargite	Citrus fruits	5
	Brinjal	2
	Cucumber	0.5
	Tomato	2
Propiconazole	Rice (milled or polished)	0.05
	Cocoa beans	0.1
	Groundnuts	0.05
	Banana	0.1
	Sugarcane	0.05
Propoxur	Rice (milled or polished)	0.1
	Cocoa beans	0.05
Prothiofos	Cauliflower	0.2
	Chilli	0.2
	Cabbage	0.2
	Chinese cabbage	0.2
Pymetrozine	Rice (milled or polished)	0.05
Pyrazosulfuron-ethyl	Rice (milled or polished)	0.1
Pyridaben	Citrus fruits	1
Quinchlorac	Rice (milled or polished)	0.5
Quintozene (sum of quintozene penthachloraniline and methyl penthachlorophenyl sulfide)	Cabbage	0.02
Quizalofop-ethyl	Okra	0.1

	Rice (milled or polished)	0.1
	Cocoa beans	0.1
	Chilli	0.1
	Long beans	0.1
	Chinese cabbage	0.1
	Cucumber	0.1
	Tomato	0.1
Sethoxydim	Okra	0.1
	Chilli	0.1
	Cabbage	0.2
	Palm oil	0.05
	Brinjal	0.1
Silafluofen	Rice (milled or polished)	0.2
Spinosad	Kale	2
	Cabbage	0.5
	Mustards	2
Tebuconazole	Banana	0.05
Tebufenozide	Okra	0.5
	Rice (milled or polished)	0.1
	Chilli	0.5
	Long beans	0.5
	Brinjal	0.5
	Tomato	0.5
Teflubenzuron	Cabbage	0.2
	Chinese cabbage	0.2
	Mustards	1
Terbuthylazine	Cocoa beans	0.5
Tetradifon	Papaya	5
	Citrus fruits	2
	Guava	5
	Mango	5
	Strawberries	2
	Watermelon	1
Thiamethoxam	Okra	0.2
	Rice (milled or polished)	0.1
	Brinjal	0.2
Thiobencarb	Rice (milled or polished)	0.1
Thiocyclam-hydrogen oxalate	Cabbage	0.3
	Brinjal	0.5
	Tomato	0.5
Thiometon (sum of thiometon, its	Citrus fruits	0.5
	Chilli	0.5

sulphoxide and sulphone, expressed as thiometon)	French beans	0.5
	Long beans	0.5
	Watermelon	0.5
	Cucumber	0.5
	Brinjal	0.5
Tolclofos-methyl	Lettuce	2
Tralomethrin	Chilli	0.5
	Cabbage	0.2
	Brinjal	0.5
	Tomato	0.5
Triadimefon	Coffee beans	0.05
Triadimenol (The limits accommodate tridimenol residues resulting from the use of triadimefon and.or triadimenol)	Cocoa beans	0.2
	Coconut/coconut oil	0.2
Trichlorfon	Rice (milled or polished)	0.1
	Citrus fruits	0.1
	Maize	0.1
	French beans	0.1
	Long beans	0.1
	Kale	0.2
	Mustards	0.1
	Watermelon	0.2
Triclopyr	Palm oil	0.1
Tridemorph	Sweet pea	0.1
	Pumpkins	0.1
	Mango	0.1
	Banana	0.1
	Legume vegetables (except as otherwise listed)	0.1
	Tea	15
	Watermelon	0.1
	Cucumber	0.1
Triflumuron	Cabbage	1
Vinclozolin (sum of vinclozolin and all metabolites containing the 3,5-dichloroaniline moiety, expressed an vinclozolin)	Strawberries	10
	Tomatoes	3
Phoxim	Meat (cow, buffalo, sheep, goat, pig, rabbit)	0.01
	Poultry meat	0.01
	Fat (cow, buffalo, sheep, goat, pig, rabbit)	0.05

	Poultry fat	0.05
Picloram	Sugarcane	0.01
Pirimiphos-methyl	Rice (milled or polished)	1
	Maize	5
	Groundnuts	2
Pretilachlor	Rice (milled or polished)	0.05
Prochloraz (sum of prochloraz and its metabolite containing the 2,4,6-trichlorophenol moiety, expressed as prochloraz)	Papaya	1
	Citrus fruits	5
	Chilli	5
	Guava	2
	Pepper (black, white)	8
	Mango	2
	Banana	5
Propamocarb	Cabbage	0.1
	Chinese cabbage	0.1
	Mustards	10
	Watermelon	2
	Honeydew	2
	Cucumber	2
	Tomato	1