



Republic of the Philippines
OFFICE OF THE SECRETARY
Elliptical Road, Diliman
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Memorandum Circular

No. _____
Series of 2020

Subject : Food Safety Measures for Rice

Pursuant to the Food Safety Act of 2013 and its Implementing Rules and Regulations of 2015, the following limits for contaminants and toxins adopted from applicable Philippine National Standard (PNS), Codex Alimentarius Commission, ASEAN database and regulatory limits for paddy and rice, are hereby made mandatory.

I. Mandatory Standards and Code of Practice

A. Maximum level (ML) of heavy metals in rice

Commodity/ Product Name	Heavy Metals	Maximum Level (ML) mg/kg	Portion of the Commodity/ Product to which the ML applies	Notes/Remarks
Husked rice or brown rice or cargo rice or unpolished rice	Arsenic	0.35	Whole commodity	a. The ML is for inorganic arsenic (As-in). b. Application of the ML for As-in can be done by analyzing total arsenic (As-tot) in rice. c. If the As-tot concentration is below the ML for As-in, no further testing is required and the sample is determined to be compliant with the ML. d. If the As-tot concentration is above the ML for As-in, follow-up testing shall be conducted to determine if the As-in concentration is above the ML.

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Polished rice including wholly milled, semi-milled rice, parboiled rice and broken rice	Arsenic	0.20	Whole commodity	a. The ML is for inorganic arsenic (As-in). b. Application of the ML for As-in can be done by analyzing total arsenic (As-tot) in rice. If the As-tot concentration is below the ML for As-in, no further testing is required and the sample is determined to be compliant with the ML. If the As-tot concentration is above the ML for As-in, follow-up testing shall be conducted to determine if the As-in concentration is above the ML.
Polished rice including wholly milled, semi-milled rice, parboiled rice and broken rice	Cadmium	0.40	Whole commodity	
Cereal grains (which include rice)	Lead	0.20	Whole commodity	The ML does not apply to buckwheat cañihua and quinoa.

Reference: Philippine National Standard for General Standard for Contaminants and Toxins in Food and Feed (PNS/BAFS 194:2017)

*The sequence of compliance for the MRLs of pesticide residue and MLs of contaminants and toxins in food and feed shall be in this order:

1. PNS
2. In the absence of the PNS, , limits set by the competent authority
3. Established limits by the Codex Alimentarius Commission and/or ASEAN subject to evaluation by the competent authority
4. MRL/ML of other countries subject to evaluation by the competent authority

B. Maximum residue limit (MRL) of pesticides in rice

Pesticide Active Ingredients	MRL (mg/kg)
2,4-D amine	0.10
2,4-D IBE	0.10
Acephate	0.02
Azoxystrobin	0.60
Benomyl	1.00
Bensulfuron methyl	0.02
Bentazone	0.10
Bispyribac sodium	0.10
BPMC (fenobucarb)	1.00

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Buprofezin	0.50
Butachlor	0.10
Carbaryl	1.00
Carbendazim	0.50
Carbofuran	0.20
Carbosulfan	0.20
Cartap hydrochloride	0.20
Chlorantraniliprole	2.00
Chlorimuron ethyl	0.01
Chlorothalonil	0.10
Chlorpyrifos	0.50
Chlothianidin	0.50
Cyfluthrin (includes β -cyfluthrin)	0.06
Cyhalofop butyl	0.05
Cyhalothrins (includes λ - cyhalothrin)	0.50
Cypermethrins (includes alpha- and zeta-Cypermethrin)	2.00
Deltamethrin	1.00
Difenoconazole	0.50
Dimethoate	0.10
Dinotefuran	2.00
Esfenvalerate	2.00
Ethoxysulfuron	0.10
Etofenprox	0.05
Fenitrothion	0.20
Fenoxaprop-p-ethyl	0.05
Fenthion	0.30
Fipronil	0.01
Flubendiamide	0.05
Flucetosulfuron	0.10
Fluoxastrobin	0.01
Fosethyl aluminum	0.05
Glyphosate	0.10
Hexaconazole	0.02
Imazosulfuron	0.10
Imidacloprid	1.00
Indoxacarb	0.50
Iprodione	3.00
Isoprocarb	0.50

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Isoprothiolane	10.00
Mancozeb	0.02
Metamifop	0.005
Methomyl	0.10
Mipc	0.50
Niclosamide	0.01
Oxadiazon	0.02
Pendimethalin	0.20
Phenthoate	0.05
Picoxystrobin	0.50
Pretilachor	0.05
Propanil	0.10
Propiconazole	0.10
Propineb	0.05
Pymetrozine	0.02
Pyribenzoxim	0.05
Sethoxydim	0.20
Tebuconazole	1.50
Tebufenozide	0.05
Tefuryltrione	0.003
Tetraconazole	0.50
Thiamethoxam	0.50
Thiophanate methyl	1.00
Thiram	5.00
Triafamone	0.003
Trifloxystrobin	5.00
Triflumezopyrim	0.01

References: ¹Philippine National Standard for Pesticide residues in rice: Maximum Residue Limits (PNS/BAFS 162:2015)

²FPA List of Registered Agricultural Pesticides Rice MRL

C. Maximum level (ML) of aflatoxin in rice

Commodity/ Product Name	Maximum Level (ML) µg/kg (Total Aflatoxins)		Portion of the Commodity/ Product to which the ML applies
	Food ¹	Feed ²	
Polished rice including wholly milled, semi-milled rice, parboiled rice and broken rice	20	50	Whole commodity
Rice, paddy or palay or rough rice	20	50	Whole commodity

References: ¹USFDA action levels in all products except milk (1969)- 20 ppb

²Philippine National Standard for General Standard for Contaminants and Toxins in Food and Feed (PNS/BAFS 194:2017)

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D. Extraneous Material and Filth Contaminants:

- (i) To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

(Reference: Codex Standard for Rice. CODEX-STAN 198-1995, Item 5.2; Requirements of Laws and Regulations Enforced by the U.S. Food and Drug Administrations, 1989, p.14

The distribution of foods which may contain repulsive or offensive matter considered as filth regardless of whether such objectionable substances can be detected in the laboratory shall be prohibited. Filth includes contaminants such as rat, mouse, and other animal hairs and excreta, whole insects, insect parts and excreta, parasitic worms, pollution from the excrement of man and animals, as well as other extraneous materials which, because of their repulsiveness, would not knowingly be eaten or used. adulterated, whether or not harm to health can be shown.

- (ii) There shall be no presence of hard or sharp foreign that measures greater than or equal to 7 mm in length. Examples of hard or foreign objects are glass fragments, pieces of metal, wood splinters, hard plastics and stones.

(Adapted from US FDA CPG Sec. 555.425)

E. Microbiological Parameters

When tested by the appropriate methods of sampling and examination, the product shall be free from microorganisms which may represent a hazard to health.

Test Microorganism	n	c	m	M
<i>Bacillus cereus</i> , Colony Forming Unit per gram (CFU/g)	5	1	100	10000
NOTE: Where: n - Number of sample units selected from a lot of food to be examined c - Maximum allowed number of defective or marginally accepted units m- Acceptable level of microorganisms determined by specified method; the values are generally based on levels that are achievable under GMP M- Level which when exceeded in one or more samples would cause the lot to be rejected as this indicates potential health hazard or imminent spoilage				

(Reference: Revised Guidelines for the Assessment of Microbiological Quality of Processed Foods, FDA-Circular No. 2013-010 dated February 27, 2013-Specifications for Bacillus cereus in frozen entrée containing rice or corn flour as main ingredient adopted for raw and cooked rice.)

F. Good Agricultural Practices, Grading and Classification

Rice locally produced or imported shall be able to demonstrate compliance to the principles of the Code of Good Agricultural Practices based on PNS/BAFS 141:2019 and pass grading and classification based on PNS/BAFS 290:2019 or any other equivalent standard in the case of imported rice.

II. Coverage/Scope:

All forms of locally produced and imported rice shall comply with the limits set in Section I of this Memorandum Circular.

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The specified limits specified in Section I of this Memorandum Circular shall apply to imported rice under the following ASEAN Harmonized Tariff Nomenclature (AHTN) Code of 2017:

- a) 1006.10 – Rice in the husk (paddy or rough);
- b) 1006.20 – Husked (brown) rice;
- c) 1006.30 – Semi milled or wholly milled rice, whether or not polished or glazed, including parboiled rice (1006.30 91)

This requirement shall be applicable to all rice stakeholders/food business operators (FBOs) including importers and exporters.

III. Additional Requirements in the Issuance of Sanitary and Phytosanitary-Import Clearance (SPS-IC):

- (i) The identified food safety measures in Section I of this Memorandum Circular shall be submitted to the Bureau of Plant Industry (BPI) in the application of a SPS-IC for rice imports. The food safety measures shall be declared in a Certificate of Analysis (CoA) issued by the accredited laboratory of the Competent Authority from the country of origin indicating or declaring the levels or limits of the following as appropriate: a) Heavy metals; b) Pesticide residues; c) Extraneous materials and filth contaminants; and d) Microbiological parameters.

The CoA is in addition to the existing quarantine pre-shipment and post- shipment SPS requirements for milled rice.

- (ii) Importers shall ensure that the pesticides found in the shipment are contained in the list of registered pesticides for rice in the Philippines.
- (iii) The National Plant Protection Organization (NPPO) of exporting countries shall submit a list of registered pesticides and its MRLs for rice.
- (iv) Fumigation practices shall be declared in the SPS-IC.
- (v) Document demonstrating compliance to the principles of Good Agricultural Practices (GAPs) issued by the competent authority.

IV. Other Food Safety Control Measures

- (i) All storage, transport and other handling facilities such as warehouses for milled rice and milling facilities, among others, shall be licensed by BPI. These facilities will be subject to inspection by BPI at any time to ensure that food hygiene and food safety measures are sufficient to prevent the contamination of rice.
- (ii) An audit shall be made mandatory on existing country sources of imported rice identified in **Annex 1**. The BPI will conduct an audit of the food control measures in the country of origin to evaluate food safety from the stage of production until the export of the commodity and/or into the Philippine port of entry.

- (iii) For new sources of imports (not identified in **Annex 1**), pre-clearance inspections shall be conducted in the country of origin under the direct supervisions of the BPI based on the result of import risk analysis.
- (iv) Good Agricultural Practices in accordance with the PNS on GAPS for Rice (PNS/BAFS 141:2019) shall be encouraged and promoted among rice producers/farmers.
- (v) Sellers in the markets shall identify the source of their rice sold or label the products being sold to ensure traceability.
- (vi) PHilMech shall be allowed survey and sample collection from all storage, transport and other handling facilities licensed by BPI as part of its conduct of research and development on food safety and food safety control measures.

V. Responsibilities of Food Safety Regulatory Agencies and Support Agencies

1. Bureau of Plant Industry (BPI)
 - a. For new sources of imports (not identified in **Annex 1**), BPI shall conduct or supervise the conduct of import risk analysis and pre-clearance inspections in the country of origin.
 - b. For sources of rice identified in **Annex 1**, BPI shall conduct an audit of food control measures in the country of origin.
 - c. When necessary, BPI shall conduct sampling of rice imports upon entry in the border and sampling of rice in the market for random testing and other purposes.
 - d. BPI shall conduct chemical tests for pesticide residues and heavy metals for rice when required.
 - e. BPI shall ensure compliance of FBOs to the requirements of Good Manufacturing Practices, Good Hygienic Practices, Good Storage Practices and Good Warehousing Practices.
2. Food Development Center (FDC)
 - a. FDC shall conduct microbiological analysis, aflatoxin and filth analysis, as requested by or thru BPI.
 - b. FDC shall provide other food safety testing and analysis available at FDC laboratories, as requested by or thru BPI.
 - c. FDC shall provide technical assistance in food testing and analysis, as requested by or thru BPI.
3. Fertilizer and Pesticide Authority (FPA)

FPA shall update BPI and BAFS on MRLs of pesticides for rice.
4. Bureau of Agriculture and Fisheries Standards (BAFS)
 - a. BAFS shall update existing Philippine National Standards relevant to rice.
 - b. BAFS shall assist food safety regulatory agencies in the crafting and formulation of the technical regulations for milled rice.

5. Philippine Center for Postharvest Development and Mechanization (PHilMech)
 - a. PHilMech shall through its Food Protection Division (FPD) carry out R&D and knowledge synthesis support in the area of food protection covering prevention, intervention, and response for incidents in food quality, food safety, food fraud and food defense concerning rice.
 - b. PHilMech shall, through its Socio-Economic and Policy Research Division (SEPRD) and on the basis of R&D results provide for policy briefs concerning rice.

VI. Food Business Operators (FBOs) for Government and Private Sectors

- a. The National Food Authority (NFA) as FBO under the government sector and similarly-situated FBOs in the private sector, shall comply with the requirements of the Good Warehousing Practices.
- b. As FBO, NFA shall comply with food safety requirements implemented by BPI in the handling/storage of locally-produced rice. The agency shall be required to submit paddy & milled rice samples procured from farmers to determine ML of heavy metal contaminants, MRL of pesticides, filth/extraneous matters, and/or microbial contaminants.
- c. Similarly, private FBOs shall be required to comply with the regulatory requirements formulated by BPI for commercially traded rice in the market

Signed this _____ day of _____ 2020.

WILLIAM D. DAR, Ph.D.
Secretary

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Annex 1

Country Sources of Imported Rice

1. Vietnam
2. Thailand
3. Myanmar
4. India
5. China
6. Pakistan
7. Japan
8. South Korea
9. Chinese Taipei
10. Italy
11. Singapore
12. Spain