

Korea, a country of integrity

청렴·**韓**·세상



Republic of Korea

Pesticide MRLs and PLS

May 27, 2021

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Ministry of Food and
Drug Safety



Pesticide MRLs for Food safety

Inspection

Regulation

Surveillance System for Agricultural Product Safety

Test → MRLs → Allow to distribute

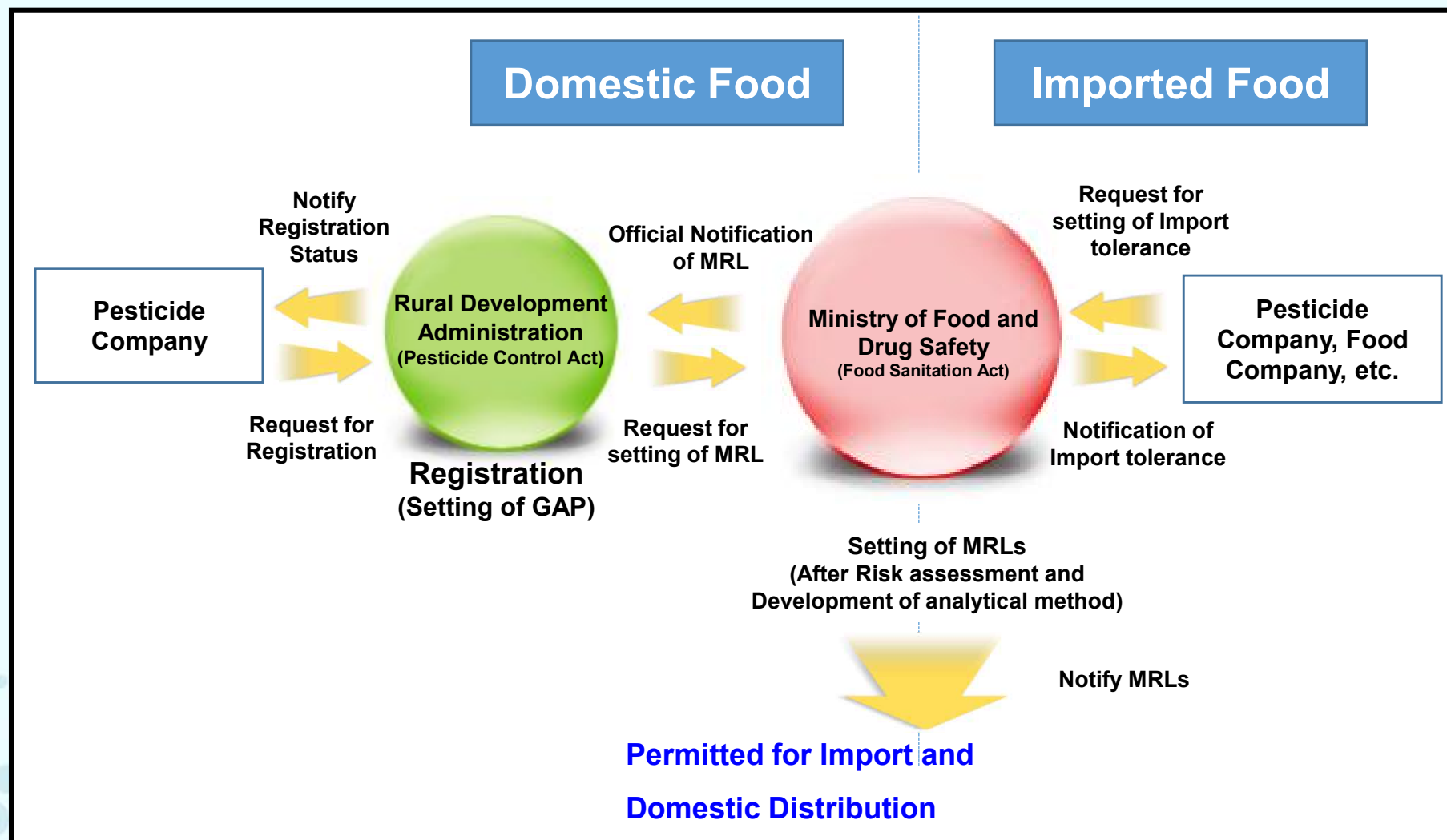
Domestic Foods

- **Test for the products in distribution(after harvest)**
 - **Local governments(Inspection office in the local market/ Institute of Health and Environment), Regional office of Food and Drug Safety**
- **Illegal products – Seizure and Discard**
- **Penalty, Prosecution, Education and Prohibition of sale(One year)**

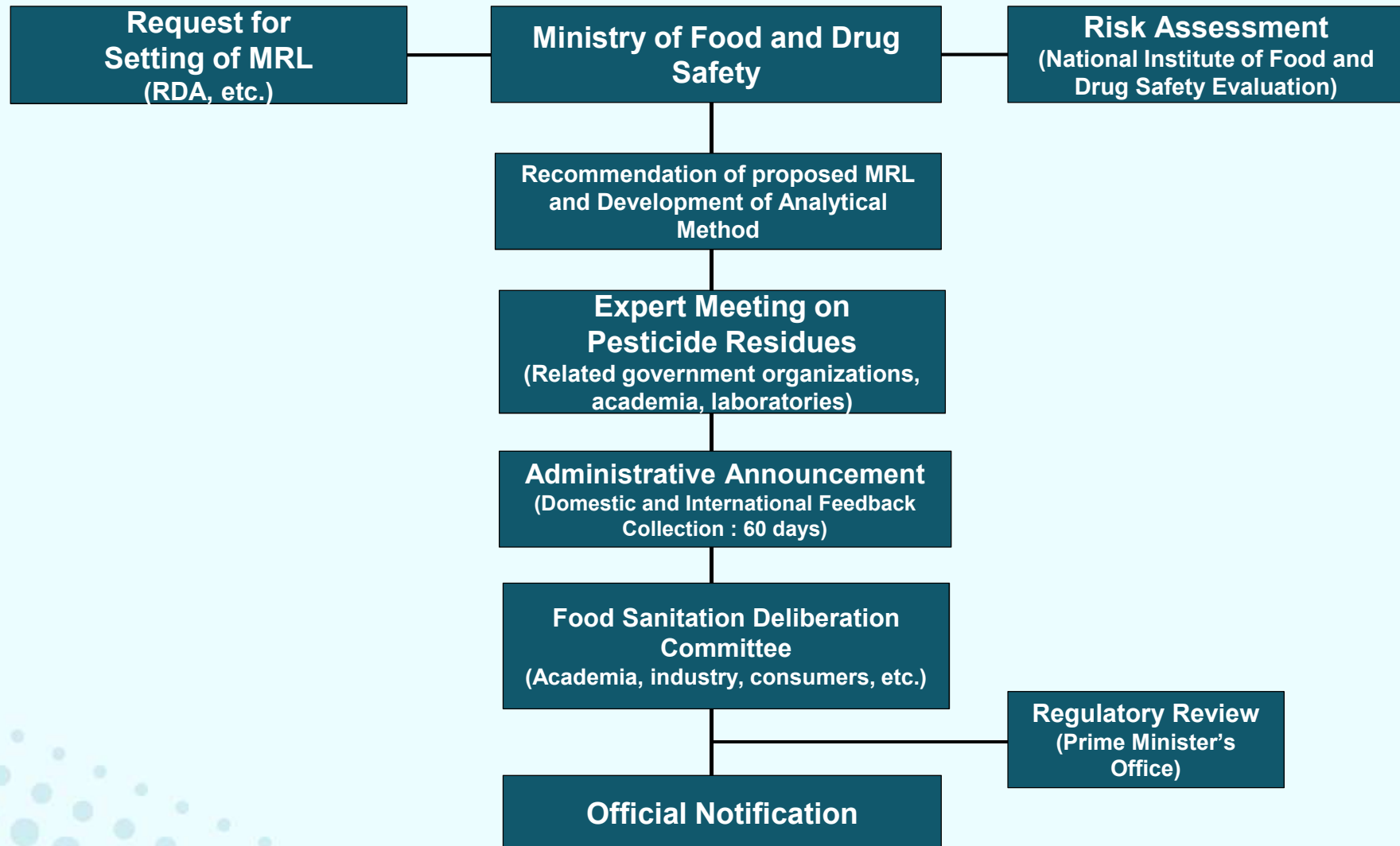
Imported Foods

- **Regional office of Food and Drug Safety**
- **Precision inspection, Random inspection**
- **Inspection with risk information**
- **Illegal products – Ship back, Discard and Alteration of use(feed, etc.)**
- **5 times of Precision inspection for the same product**

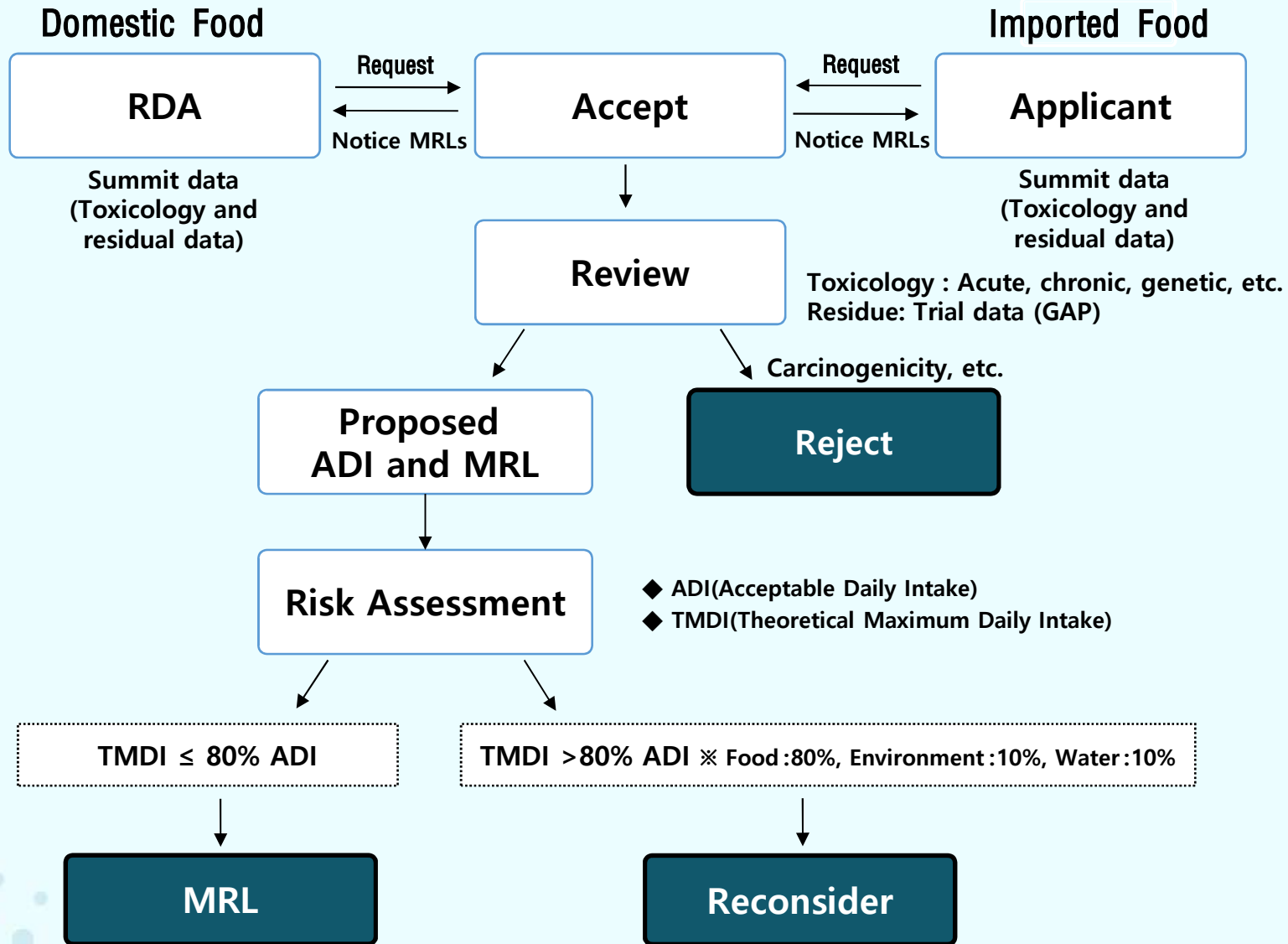
For the compounds allowed by authorities to be used
(+ Extraneous compounds, etc.)



Procedure of Setting of MRLs



I Pesticide MRLs for Food safety



Laws and Regulations relevant to Setting Pesticide MRL

❖ Food Sanitation Act

Article 7(Standards and Specifications concerning Foods or Food additives)

Paragraph 3, Article 7 (Request for establishment of MRLs of pesticides, etc. in food)

❖ Enforcement Rule of the Food Sanitation Act

Paragraph 2, Article 5(Establishment of MRLs of pesticides or veterinary drugs in food)

Paragraph 3, Article 5(Revision of MRLs, etc.)

❖ Food Code (MFDS Notice)

[Annex 7] Guidelines on Setting MRLs for Pesticide and Veterinary Drug in Food

❖ **Pesticide Control Act**

Article 8(Registration of items manufactured in Republic of Korea)

Article 23(Guidelines, etc. for safe use of pesticide, etc.)

❖ **Criteria for registration of items and active compounds (RDA Notice)**

Requirements for trials and documents for national registration

- **Efficacy, Phytotoxicity, General toxicity, Ecotoxicity, Residues on crop, Environmental fate(Soil and water), Farmworker's pesticide exposure, etc.**

MFDS Notice

https://www.mfds.go.kr/brd/m_207/list.do

MFDS Notice (Full text)

https://www.mfds.go.kr/brd/m_211/list.do

Pesticide MRL Database

<https://www.foodsafetykorea.go.kr/residue/main.do>



Food code and Import Tolerance

Clause

Application

Food Code (MFDS Notice)

- **Basic principle and PLS**
- **Principle for group MRL**

7) Maximum Residual Limits (MRLs) for Pesticides

(1) Pesticide MRLs in agricultural commodities

- ① The MRLs for pesticide in agricultural commodities is shown in [Annex 4]. However, when there are individual MRL and group MRL, individual MRL shall be applied first
- ② If MRLs for pesticide residues in agricultural commodities are not set in [Annex 4], default MRL of 0.01 mg/kg is applied.

- **Exemption list (61 compounds)**

- ③ Components of the active ingredients contained in the pesticide registered for use in the 'Pesticide Control Act' or legally used in foreign countries under the laws of the country may be exempted from setting MRLs for the following reasons. And the ingredients to be exempted are shown in the table below.
- Ⓐ Ingredients that are unlikely to cause harm to the human body due to their low toxicity
 - Ⓑ Ingredients that do not remain in food at all
 - Ⓒ Ingredients that are difficult to distinguish from those contained in foods due to their natural presence.
 - Ⓓ Safety-guaranteed natural plant protection (microorganisms, etc.) ingredients

▪ **MRL on Soybean and Mung bean sprout**

(2) Pesticide MRLs and application principles for soybean (mung bean) sprouts

- ① 6-BA (6-BA, 6-Benzyl aminopurine, Benzyladenine) residue shall not be more than 0.2 mg/kg.
- ② Carbendazim, Thiabendazole, Thiram, Captan, sulfur dioxide and other pesticides without MRLs established for soybeans (including mung beans) shall not be detected.
- ③ For those pesticides with MRLs established for soybeans (including mung beans), 1/10 of the MRL for soybeans (including mung beans) shall be applied by factoring in the MRL derived from the soybeans (including mung beans).

▪ **MRL on Processed foods**

(3) Application of provisional pesticide MRLs for processed foods

When pesticides are detected in processed foods for which no MRLs are set in [Annex 4], the pesticide MRL is applied as follows.

- ① Residues may be permitted within the scope of the MRLs of the raw commodities; that is, the standards for ingredient agricultural products and livestock products shall apply according to the content of the ingredients. Also, in case of water content change due to drying process, etc., such water content shall be considered for application. [However, 7 times of the pesticide MRL in hot peppers shall apply to dried hot pepper (including hot pepper powder and shredded hot pepper); 6 times of the MRL in teas, to green tea extracts; 4 times of the MRL in fresh ginseng, to dried ginseng and red ginseng; and 8 times of the MRL in fresh ginseng, to ginseng and red ginseng concentrates, respectively.]

10 times of the MRL in fresh herbs, to dried herbs (2019)

[Annex 4] Pesticide MRLs on Agricultural products

[별표 4]

농산물의 농약 잔류허용기준

식품명	mg/kg	식품명	mg/kg	식품명	mg/kg
(1) 이미녹타딘(Iminoctadine)					
◎ 잔류물의 정의 : Iminoctadine					
가지	0.2	배	0.1	오디	1.0 ^T
감	0.3	복분자	0.7	오렌지	0.5 ^T
감귤	0.5	복숭아	0.5	오미자(건조)	1.0
건삼	0.2	부추	2.0	오이	0.5
고구마	0.05	블루베리	1.0 ^T	옥수수	0.05
고구마줄기	0.05	비트(뿌리)	0.05	율무	0.1
고추	2.0	비트(잎)	0.05 ^T	인삼농축액	0.5
구기자	3.0	사과	1.0	자두	0.5 ^T
구기자(건조)	10	산마늘잎	5.0 ^T	차	1.0
기장	0.7	살구	0.5 ^T	참외	0.3
대추	0.5 ^T	석류	0.1 ^T	취나물	7.0
더덕	0.05 ^T	수박	0.05	키위	0.3
둥굴레(뿌리)	0.05 ^T	수삼	0.1	토마토	0.7
둥굴레(잎)	0.05 ^T	쌀	0.05	파	0.5
들깨잎	5.0 ^T	쑥갓	1.0 ^T	포도	1.0
딸기	2.0	아르니아	1.0 ^T	풋마늘	0.7
레몬	0.5 ^T	아스파라거스	0.2	피망	2.0
마	0.05 ^T	양배추	0.05 ^T	홍삼	0.2
마늘	0.1	양상추	0.05 ^T	홍삼농축액	0.5
망고	0.3 ^T	양파	0.05	홍화씨	0.05
매실	2.0				

- National registration
- Import Tolerance
- Temporary MRL
(~December 31, 2021)

Database (Korean and English)

※ Website

※ Mobile Food Code

Food Code Website

<http://www.foodsafetykorea.go.kr/foodcode/index.jsp>

The screenshot shows the website interface for the Ministry of Food and Drug Safety. The main navigation bar includes '식품안전' (Food Safety), '농약 잔류 허용기준 (Pesticide MRLs)', '식품유형별 기준규격' (Standards by Food Type), '식품첨가물안전' (Food Additive Safety), and '기구 및 용기포장 안전' (Safety of Instruments and Containers/Packaging). The '농약별 (Pesticide)' filter is selected. The search results list the following pesticides:

농약명 (Pesticide Name)
다미노자이드 (Daminozide)
다이뮤론 (Dymron, Dymron)
다이아지논 (Diazinon)
다이콧 (Diquat)
다조멧 (Dazomet)
델타메트린 (Deltamethrin)
도딘 (Dodine)

Anyone who want MRLs for new compound/commodity or harmonized with CODEX/other countries

❖ Import Tolerance(IT)

- Submission of Label(GAP) and data → Review → Setting of MRL

❖ Support for Applicants

- Pre- review and advice by email
 - ✓ MFDS reviewers check the data in advance of application
- For Generic compound
 - ✓ Residue data ↔ Report from JMPR, EPA or EFSA
 - ✓ Temporary exemption from the requirement to submit Korean-translated summary (~ December 2021)

Manual on Import Tolerances Application

https://www.foodsafetykorea.go.kr/portal/board/board.do?menu_grp=MENU_NEW02&menu_no=3840

The screenshot shows the website interface for the Korea Food Safety Authority. At the top, there is a navigation bar with the logo '식품안전정보포털 Food 식품안전나라' and a search bar. Below the navigation bar, there are several menu items: '식품·안전', '위해·예방', '건강·영양', '전문정보', and '알림·교육'. The '위해·예방' menu is expanded, showing sub-items like '농약허용물질목록관리제도' and '자료실'. The '자료실' (Data Room) sub-menu is selected, and the '간행물' (Publications) button is highlighted. Below this, there are buttons for '보도자료', '카드뉴스 등 자료', and '자주하는 질문'. The main content area shows a list of articles with the following details:

Article Title	Year	Date	Views
수입식품 중 잔류허용기준 설정 신청방법 매뉴얼(2021년)	2021년	2020.12.24	259
PLS_리플렛(영문)(2019년)	2019년	2019.12.30	1,465
수입식품 중 잔류허용기준 설정 신청방법 매뉴얼(2019년)	2019년	2019.12.20	763



Positive List System in ROK

Status

Recommendation

Illegal residues in imported Foods (January ~ March)

Illegal Rate(%) : **0.6(2018)** → **1.1(2019)** → **0.8(2020)** → **1.0(2021)**

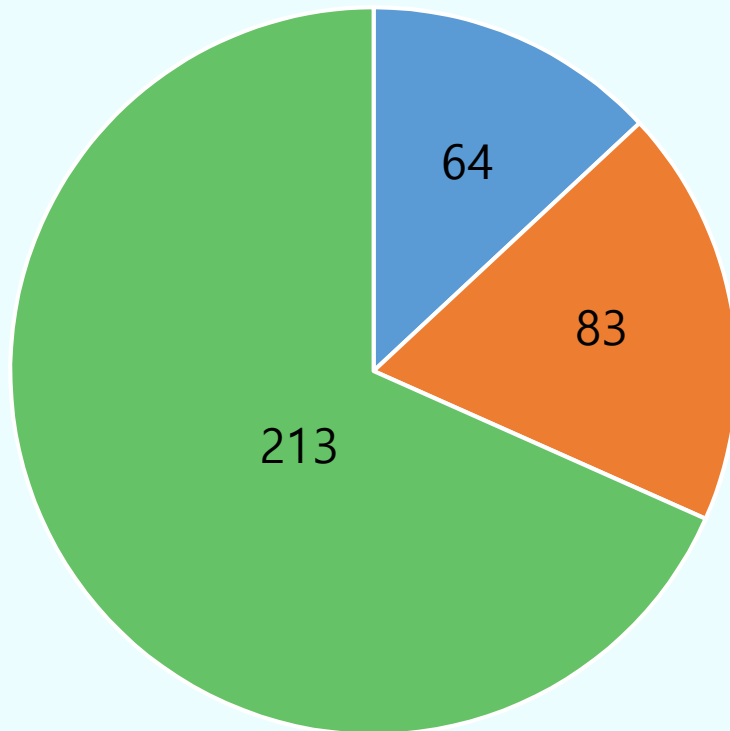
※ Illegal cases in 2021

Compounds : Chlorpyrifos, Acetamiprid, Cypermethrin, etc.

Commodities : Spices and Herbs (42%) * Cumin, Culantro, Basil, etc.

* **MFDS website on imported foods [impfood.mfds.go.kr]**

Status for Temporary MRLs



- Completed or in progress
- Pre-review
- Temporary MRLs

In the survey for intention to application for MRLs(ITs) in October 2020, The U.S. submitted the list for 360 TMRLs. Among them, 64 MRLs was established or in progress. (About 18%)

To complete the establishment of ITs within this year, the IT application must be submitted by June 1, 2021.

The MFDS plans to complete the administrative announcement and WTO notice in September and the MFDS notice in December.

Pesticide residues in agricultural products from U.S.

Illegal residues after PLS (2019~2021)

Dichlorvos on Walnut (2019)

Piperonyl butoxide on Husked rice, Dichlorvos on sesame (2020)

Residues detected more than 0.01 mg/kg (2019)

*** The items are passed with the Temporary MRLs at that time.**

Imazalil on Almond, Pirimiphos–methyl on maize,

Imazalil on Citrus fruits (mandarin, orange, grapefruit) (IT in progress),

Fenpropathrin on Blueberry and Grape



Q&A

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