This is a provisional English translation of an excerpt from the original full report.

Risk Assessment Report

Polyoxin complex

(Pesticides)

Food Safety Commission of Japan (FSCJ)

June 2021

ABSTRACT

The FSCJ conducted a risk assessment of polyoxin complex (polyoxin A, CAS No.19396-03-3; polyoxin B, CAS No.19396-06-6; polyoxin G, CAS No.22976-88-1; polyoxin H, CAS No.24695-54-3; polyoxin J, CAS No.22976-89-2; polyoxin K, CAS No.22886-46-0; polyoxin L, CAS No.22976-90-5; and polyoxin M, CAS No.34718-88-2), a nucleoside fungicide, based on various documents.

Test results used in the assessment include fate in animals (rats), fate in plants (lettuce, tomatoes and grapes), residues in crops, subacute toxicity (rats and dogs), chronic toxicity (dogs), combined chronic toxicity/carcinogenicity (rats and mice), two-generation reproductive toxicity (mice), developmental toxicity (rats and rabbits) and genotoxicity.

Major adverse effects of polyoxin complex observed were in body weight (suppressed body weight gain) and the kidneys (increased weight). No carcinogenicity, effect on fertility, teratogenicity or genotoxicity was observed.

Based on these results, polyoxin complex (parent compound only) was identified as the relevant substance for the residue definition for dietary risk assessment in agricultural products.

The lowest no-observed-adverse-effect level (NOAEL) obtained from these studies was 250 mg/kg bw per day in a developmental toxicity study in rabbits. The FSCJ specified an acceptable daily intake (ADI) of 2.5 mg/kg bw per day by applying a safety factor of 100 to this NOAEL.

Since there was no adverse effect likely to be elicited by a single oral administration of polyoxin complex, the FSCJ considered it unnecessary to specify an acute reference dose (ARfD).

Table 1. *Levels relevant to toxicological evaluation of polyoxin complex*

Species	Study	Dose (mg/kg bw/ per day)	NOAEL (mg/kg bw per day)	LOAEL (mg/kg bw per day)	Critical endpoints[1)]
Rat	90-day subacute toxicity study	0, 200, 2 000, 20 000 ppm M: 0, 11.7, 117, 1 180 F: 0, 13.4, 134, 1 350	M: 117 F: 134	M: 1 180 F: 1 350	M: Occult blood in urine, increased relative weights of the kidneys F: Increased relative weights of the kidneys
	Two-year combined chronic toxicity/ carcinogenicity study	0, 480, 4 800, 48 000 ppm M: 0, 30.1, 294, 2 940 F: 0, 33.0, 325, 3 150	M: 294 F: 3 150	M: 2 940 F: -	M: Increased absolute and relative weights of the kidneys F: No toxicity (No carcinogenicity is observed.)
	Developmental toxicity study	0, 100, 300, 1 000	Parent: 1 000 Fetus: 1 000	Parent: - Fetus: -	Parent and fetus: No toxicity (No teratogenicity is observed.)
Mouse	Two-year combined chronic toxicity/ carcinogenicity study	0, 480, 4 800, 48 000 ppm M: 0, 66.2, 666, 6 750 F: 0, 67.1, 641, 6 370	M: 6 750 F: 641	M: - F: 6 370	M: No toxicity F: Increased absolute and relative weights of thymus, decreased absolute and relative weights of the spleen (No carcinogenicity is observed.)
	Two-generation reproductive toxicity study	0, 120, 12 000 ppm PM: 0, 18.5, 1 960 PF: 0, 21.4, 2 240 F_1M: 0, 17.6, 1 650 F_1F: 0, 21.2, 2 070	Parent and offspring PM: 18.5 PF: 21.4 F_1M: 17.6 F_1F: 21.2	Parent and offspring PM: 1 960 PF: 2 240 F_1M: 1 650 F_1F: 2 070	Parent: M/F: Suppressed body weight gain Offspring: Suppressed body weight gain (No effect on fertility is observed.)
Rabbit	Developmental toxicity study	0, 60, 250, 1 000	Dams: 250 Fetuses:250	Dams: 1 000 Fetuses: 1 000	Dams: Death, suppressed body weight gain, etc. Fetuses: Delayed ossification in the fourth and fifth middle phalanges of the forelimbs

					(No teratogenicity is observed.)
Dog	90-day subacute toxicity study	0, 1 000, 6 000, 36 000 ppm M: 0, 29.6 176, 1 090 F: 0, 30.8, 186, 1 110	M: 1 090 F: 1 110	M: - F: -	M/F: No toxicity
	One-year chronic toxicity study	0, 1 000, 6 000, 36 000 ppm M: 0, 29.8, 174, 1 070 F: 0, 31.6, 178, 1 170	M: 1 070 F: 1 170	M: - F: -	M/F: No toxicity
ADI			NOAEL: 250 SF: 100 ADI: 2.5		
The critical study for setting ADI			Developmental toxicity study (rabbit)		

ADI, Acceptable daily intake; NOAEL, No-observed-adverse-effect level; SF, Safety factor

[1)] The adverse effect observed at LOAEL

-: LOAEL could not be specified.