

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

Risk Assessment Report

Diazinon

(Pesticides and Veterinary Medicinal Products)

Food Safety Commission of Japan (FSCJ)

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Abstract

FSCJ conducted a risk assessment of an organophosphorus insecticide, diazinon (CAS No. 333-41-5) based on summary reports submitted by the applicant and other documents from JMPR and the Government of the United States of America.

The data used in the assessment include fate in animals (rats and livestock animals), fate in plants (paddy rice, Japanese white radish and others), residues in crops, subacute toxicity (rats and dogs), subacute neurotoxicity (rats), chronic toxicity (rats and dogs), combined chronic toxicity/carcinogenicity (rats), carcinogenicity (mice), 2-generation reproductive toxicity (rats), developmental toxicity (rats and rabbits), genotoxicity and others.

Major adverse effects of diazinon observed are inhibition of RBC and brain AChE activity and neurological symptoms. Diazinon did not show any clear carcinogenicity, teratogenicity and genotoxicity relevant to human health.

In a two-generation reproduction test of diazinon in rats, decreased copulation index and fertility rate were observed.

Based on the above results, only diazinon (parent compound) was identified as the residue definition for this dietary risk assessment in agricultural products, livestock products and fishery products.

FSCJ specified the ADI for diazinon to be 0.001 mg/kg bw/day, dividing the NOAEL of 0.1 mg/kg bw/day, which was obtained from a 2-year combined chronic toxicity/carcinogenicity study in rats, by the safety factor of 100.