ABSTRACT

FSCJ conducted a risk assessment of pyroquilon (CAS No. 57369-32-1), a quinoline insecticide, based on summary reports made by applicants.

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

Major adverse effects of pyroquilon observed are decreased body weight gain and increased organ weights in the liver. Pyroquilon showed no neurotoxicity, carcinogenicity, reproductive toxicity, teratogenicity and genotoxicity.

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

The lowest no-observed-adverse-effect level (NOAEL) obtained was 1.9 mg/kg bw/day in a two-generation reproductive toxicity test in rats. Applying a safety factor of 100 to the NOAEL, FSCJ specified an acceptable daily intake (ADI) of 0.019 mg/kg bw/day.

The lowest NOAEL for potential adverse effects of a single oral administration of pyroquilon was 20 mg/kg bw/day in general pharmacology data in mice. Applying a safety factor of 100 to the NOAEL, FSCJ specified an acute reference dose (ARfD) to be 0.2 mg/kg bw.