

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

## Risk Assessment Report

### Nanafrocin (Nanaomycin A) (Veterinary Medicinal Products)

Food Safety Commission of Japan (FSCJ)  
November 2019

#### ABSTRACT

FSCJ conducted a risk assessment of nanafrocin (CAS No. 52934-83-5), an antibiotic, based on a written application for the marketing approval of new veterinary medicinal products.

Nanafrocin gave slightly positive results of the *in vitro* reverse mutation test and of the chromosomal aberration test without rat S9 mix, but negative results in the micronucleus test in mice and in the gene mutation test in transgenic mice. Therefore, nanafrocin was judged as not genotoxic to human health through foods as long as used appropriately as a veterinary medicinal product. On the basis of negative results of genotoxicity study, it is possible to specify a toxicological ADI for nanafrocin.

The major adverse effects of nanafrocin observed in various toxicity studies were suppressed body weight, increased relative weight of different organs, swelling of the kidney, dilation of renal tubule lumen, deposition of brown granules in epithelial cells of the renal tubules, and others. The toxicity observed at the lowest dose among these toxicity studies was the increased relative weight of kidneys and urine coloring in a 90-day subacute toxicity study in rats, and the LOAEL of this study was 5 mg/kg bw/day.

FSCJ applied an additional safety factor of 5 to the toxicological ADI based on the use of the LOAEL where the critical adverse effect on the kidney did not indicate serious toxicity or toxic response related to carcinogenicity although chronic toxicity study and carcinogenicity study were not conducted. As the result, FSCJ specified the toxicological ADI to be 0.01 mg/kg bw/day applying safety factor of 500 to the LOAEL of 5 mg/kg bw/day obtained in 90-day subacute toxicity study in rats.

Microbiological ADI was calculated to be 0.01 mg/kg bw/day.

FSCJ specified the ADI of nanafrocin as 0.01 mg/kg bw/day which was the same levels in both toxicological ADI and the microbiological ADI.