

CFS announces risk assessment study results on Methoxychlor in food

The Centre for Food Safety (CFS) of the Food and Environmental Hygiene Department announced today (October 11) the results of a recently completed risk assessment study on Methoxychlor (MXC) in food. The CFS collected 300 food samples at the retail level for testing of MXC levels with the aim of estimating the exposure of the local adult population to MXC through consumption of these food items, and to assess the associated health risk. The study results showed that the health concern for the local population due to dietary exposure to MXC from the food items covered in the study is low.

A spokesman for the CFS said, "MXC is an organochlorine pesticide and has been currently prohibited for use in agriculture in many countries. As MXC persists in the environment and has a strong potential for long-range environmental transportation, food may contain low levels of MXC residues. Continual monitoring of MXC residues in food and assessing the associated risks are therefore warranted."

Animal studies showed that MXC is not genotoxic and not carcinogenic in animals. In experiments with mammals, MXC does not accumulate and the acute toxicity from oral exposure to MXC is low. The main targets for the chronic toxicity of MXC are the nervous, endocrine and reproductive systems.

The 300 food samples taken from local markets for testing of MXC levels covering 100 food items included 14 food groups, namely cereals and grains products, vegetables, fruits, nuts and seeds, meats and offals, eggs and egg products, milk and dairy products, fish, fish products, crustaceans and molluscs, fats and oils, beverages, herbs and spices, and honey. The study results showed that MXC was not detectable in all samples, with the limit of detection for MXC of 0.1 micrograms (μg)/kilogram. For dietary exposure, according to the upper-bound mean concentration of MXC in the collected food samples, the estimates of average and high consumers were 0.002283 $\mu\text{g}/\text{kg}$ body weight (bw) per day and 0.003608 $\mu\text{g}/\text{kg}$ bw per day respectively. These dietary exposures are much lower than the acceptable daily intake established by the Joint Food and Agriculture Organization/World Health Organization Meeting on Pesticide residues (i.e. 100 $\mu\text{g}/\text{kg}$ bw per day), indicating that the health concern for the local adult population due to their MXC exposure upon usual consumption of food is considered low.

The spokesman said that the findings of the dietary exposure to MXC in the present study do not warrant changes to the basic dietary advice on healthy eating. The public is advised to maintain a balanced and varied diet which includes a wide variety of fruits and vegetables. To remove pesticide residues in fruits and vegetables while retaining their nutritional value, members of the public can rinse fruits and vegetables thoroughly under clean running water, scrub produce with hard surfaces with a clean produce brush to remove dirt and substances including pesticides and contaminants from the surface and fissures.

For details of the study, please visit the CFS's website at www.cfs.gov.hk.