

Hexythiazox

(4RS,5RS)-5-(4-Chlorophenyl)-N-cyclohexyl-4-methyl-2-oxo-1,3-thiazolidine-3-carboxamide

Hexythiazox (trade name: Savey) is a non-systemic pesticide used for mite control. In 2009, about 8,100 pounds of hexythiazox were used in California, mainly on almonds, corn, and cherries. Tolerance levels have been established in foods, e.g., 10 ppm in almonds and 3 ppm in strawberries. Human exposure may occur in workers as a result of pesticide applications and in the general population as a result of consumption of food with pesticide residues.

Hexythiazox passed the animal data screen, underwent a preliminary toxicological evaluation, and is being brought to the Carcinogen Identification Committee for consultation. This is a compilation of the relevant studies identified during the preliminary toxicological evaluation.

Epidemiological data

No cancer epidemiology studies were identified.

Animal carcinogenicity data

- Two-year dietary studies in mice
 - Male and female B6C3F₁ mice: Inoue (1985) as reviewed in U.S. EPA (2009)
 - *Increase in hepatocellular carcinoma only (by pairwise comparison and trend), and hepatocellular adenoma/carcinoma combined (by pairwise comparison and trend) in females*
 - *Increase in hepatocellular adenoma/carcinoma combined (by trend) in males*
- Two-year dietary studies in rats
 - Male and female Fischer 344 rats: Spicer (1984) as reviewed in U.S. EPA (2009)
 - *Increase in benign mammary fibroadenoma (rare tumor in males) (by pairwise comparison and trend) in males*
 - *No treatment-related tumor findings in females*

Other relevant data

- Genotoxicity as reviewed in U.S. EPA (2009)
 - *Salmonella typhimurium* and *E. Coli* mutagenicity assay with metabolic activation (*negative*)
 - Chromosome aberration in Chinese hamster ovary cells (*negative*)
 - Unscheduled DNA synthesis in primary rat hepatocyte (with and without metabolic activation) (*negative*)
 - Mouse micronucleus assays (*negative*)
 - Cytogenic test in Chinese hamster bone marrow *in vivo* (*negative*)

Reviews

- U.S. EPA (2009): “likely to be carcinogenic to humans”

References¹

U.S. EPA (2009). Memorandum of Third Peer Review of Hexythiazox (Savey): Report of the Cancer Assessment Review Committee. September 2, 2009.

¹ Excerpts or the complete publication have been provided to members of the Carcinogen Identification Committee, in the order in which they are discussed in this document.