Aspartame

Aspartame is an artificial sweetener that is found in more than 6,000 products used by more than 200 million people worldwide. Typical consumption is 2-3 mg/kg per day, but can be much higher.

Aspartame 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 relevant studies identified during the preliminary toxicological evaluation.

Epidemiological data

- Ecological studies
  - Time-related studies of brain tumor incidence and consumption of aspartame: Roberts (1991), Olney et al. (1996)

- Cohort study
  - Prospective cohort study of aspartame consumption and hematopoietic and brain malignancies: Lim et al. (2006)

- Case-control studies
  - Integrated analysis of several Italian case-control studies of various cancers and aspartame consumption: Gallus et al. (2007)

Animal carcinogenicity data

- Long-term diet studies in rats
  - Two-year studies in male and female Charles River rats: Hazelton Laboratories (1973)
  - Studies in male and female Sprague-Dawley rats (eight weeks old at start of treatment, fed for life): Soffritti et al. (2005), Belpoggi et al. (2006), Soffritti et al. (2006)
  - Transplacental plus entire lifetime exposure studies in male and female Sprague-Dawley rats: Soffritti et al. (2007)

Other relevant data

- Genotoxicity
  - Review: Magnuson et al. (2007)

- Metabolism
  - Aspartame metabolism to known carcinogens, including methanol and formaldehyde: Soffritti et al. (2006); Magnuson et al. (2007)
Reviews

- Magnuson et al. (2007)
- Soffritti et al. (2008)

References


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1 Copies of these listed references, as either the abstract, the relevant sections of the publication, or the complete publication, have been provided to members of the Carcinogen Identification Committee. These references have been provided in the order in which they are discussed in this document.