

**ISOPROPYL ALCOHOL MANUFACTURE (STRONG-ACID PROCESS) (Group 1),
ISOPROPYL ALCOHOL (Group 3) and
ISOPROPYL OILS (Group 3)**

A. Evidence for carcinogenicity to humans (*sufficient* for the manufacture of isopropyl alcohol by the strong-acid process; *inadequate* for isopropyl alcohol and isopropyl oils)

An increased incidence of cancer of the paranasal sinuses was observed in workers at factories where isopropyl alcohol was manufactured by the strong-acid process^{1,2}. The risk for laryngeal cancer may also have been elevated in these workers¹. It is unclear whether the cancer risk is due to the presence of diisopropyl sulphate, which is an intermediate in the process, to isopropyl oils, which are formed as by-products, or to other factors, such as sulphuric acid. Epidemiological data concerning the manufacture of isopropyl alcohol by the weak-acid process are insufficient for an evaluation of carcinogenicity³. (See also the summary of data for diethyl sulphate, p. 198.)

B. Evidence for carcinogenicity to animals (*inadequate* for isopropyl alcohol and isopropyl oils)

Isopropyl oils, formed during the manufacture of isopropyl alcohol by both the strong-acid and weak-acid processes, were tested inadequately in mice by inhalation, skin application and subcutaneous administration. Isopropyl oils formed during the strong-acid process were also tested inadequately in dogs by inhalation and instillation into the sinuses¹.

The available data on isopropyl alcohol were inadequate for evaluation¹.

C. Other relevant data

No data were available to the Working Group.

References

¹IARC *Monographs*, 15, 223-243, 1977

²Alderson, M.R. & Rattan, N.S. (1980) Mortality of workers on an isopropyl alcohol plant and two MEK dewaxing plants. *Br. J. ind. Med.*, 37, 85-89

³Wright, U. (1979) *The hidden carcinogen in the manufacture of isopropyl alcohol*. In: Deichmann, W.B., ed., *Toxicology and Occupational Medicine*, New York, Elsevier, pp. 93-97