

Ethylene – Addendum: withdrawal of EKA

Assessment values in biological material – Translation of the German version from 2022

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Abstract

In 1994, the German Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area has evaluated ethylene [74-85-1] and has derived exposure equivalents for carcinogenic substances (EKA) for ethylene in air and the parameter *N*-(2-hydroxyethyl)valine in blood. The EKA are essentially based on unpublished data and relevant studies had appeared since the last evaluation. Therefore, the EKA will be re-evaluated and are withdrawn in the meantime.

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EKA (2021)	not established
MAK value (1993)	–
Carcinogenicity (1993)	Category 3

Re-evaluation

In the evaluation of ethylene in 1994, according to the toxicokinetic model calculations at that time, it was assumed that exposure to ethylene in the range of about 50 ml ethylene/m³ would result in an internal exposure to ethylene oxide of the organism equivalent to that after exposure to 1 ml ethylene oxide/m³. Ethylene oxide was classified in Carcinogen Category 2, exposure to ethylene was therefore considered a carcinogenic risk and exposure equivalents for carcinogenic substances (EKA) were derived for ethylene in air and the parameter *N*-(2-hydroxyethyl)valine (HEV) in blood (translated in Bolt 1995).

As the EKA were based on unpublished data and relevant studies (Csanády et al. 2000; Filser et al. 2013; Filser and Klein 2018; Granath et al. 1996; Kirman et al. 2021; Thier and Bolt 2000) have appeared since the last evaluation, which make a re-evaluation necessary,

the EKA are withdrawn in the meantime.

Notes

Competing interests

The established rules and measures of the Commission to avoid conflicts of interest (www.dfg.de/mak/conflicts_interest) ensure that the content and conclusions of the publication are strictly science-based.

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