

The MAK Collection for Occupational Health and Safety

Addendum to 2-butoxyethylacetate (ethylene glycol monobutyl ether acetate)

Assessment Values in Biological Material – Translation of the German version from 2016

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Keywords: 2-butoxyethyl acetate; ethylene glycol monobutyl ether acetate; butoxy acetic acid; biological tolerance value; BAT value

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BAT Value Documentation

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Abstract

In 2015 the German Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area has re-evaluated the biological tolerance value at the work place (BAT value) for 2-butoxyethylacetate (ethylene glycol monobutyl ether acetate) [CAS No. 112-07-2], considering butoxyacetic acid in urine to characterise the internal exposure.

Due to the high variability of conjugated amounts of the butoxyacetic acid and the limitation of conjugated amounts at high exposure levels the previous BAT value for free 2-butoxyacetic acid is converted with a factor of 1.5. Additionally, the impact of diuresis is considered by the relation to the creatinine concentration. Therefore, a BAT value for the total butoxyacetic acid excretion of 150 mg butoxyacetic acid (after hydrolysis)/g creatinine was established. The sampling time is at the end of exposure/shift after several previous shifts.

As the effects of the two glycol ethers 2-butoxyethyl acetate and 2-butoxyethanol are largely the same in the human organism, the BAT value applies to both and for combined exposure. The two substances were discussed together in the addendum of 2-butoxyethanol.

Keywords

2-butoxyethylacetate; ethylene glycol monobutyl ether acetate; occupational exposure; biological tolerance value; BAT value; toxicity

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Addendum to 2-Butoxyethylacetate (Ethylene glycol monobutyl ether acetate)

BAT (2015)

150 mg butoxyacetic acid (after hydrolysis)/g creatinine

Sampling time: end of exposure or end of shift; for long-term exposures: at the end of the shift after several shifts

MAK value (2006)

10 ml/m³ (ppm)* \triangleq 66 mg/m³**

Absorption through the skin (1980) H

Carcinogenicity (2006)

Carcinogen category 4

* MAK value for the sum of the air concentrations of ethylene glycol monobutyl ether and ethylene glycol monobutyl ether acetate

** The substance can be present as vapour and aerosol at the same time.

Because of their nearly identical effects in humans, 2-butoxyethanol (ethylene glycol monobutyl ether) and 2-butoxyethyl acetate (ethylene glycol monobutyl ether acetate) are also in the Addendum considered together since both are metabolized to butoxyacetic acid as toxic agent (see BAT Documentation "2-Butoxyethanol (ethylene glycol monobutyl ether)" 2016).

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