

Health assessment of soft drinks with added brominated vegetable oils

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Brominated vegetable oils can be used as stabilisers for aroma oils in fruity flavoured beverages. In the USA these substances are approved for up to 15 mg/L (15 ppm). In the European Union (EU), these vegetable oils are not permitted as additives. For this reason, products containing brominated vegetable oils and / or their components (brominated fatty acids) cannot, irrespective of the content, be traded. At the instance of the German food safety authority which rejected two beverages imported from the USA, the BfR was asked to assess the health effects of soft drinks to which brominated vegetable oils are added.

Animal experiments with brominated vegetable oils have shown that brominated fatty acids may be deposited in various organs. In case of high dosage, the weight of the organs can increase, and the organs themselves may change as a result. At very high doses, the substances had an effect on fertility. No long-term studies required to derive no observed adverse effect levels (NOAEL) have been published as yet.

Based on the current state of knowledge, no acute risks from soft drinks with contents up to 15 mg/L of brominated fatty acids can be derived. The case studies cited in this context about a connection between high consumption of soft drinks containing added brominated vegetable oils and adverse health effects are not plausible from a scientific viewpoint, nor do they prove a general risk. In the opinion of the BfR, it is notably not sufficiently clear whether brominated fatty acids may have any long-term health effects. The same applies to their accumulation potential in humans which may be higher than in the tested animal species. In this context, the high accumulation levels observed in children in particular requires clarification. As a general principle, the use of substances which have high accumulation potential in humans is to be seen as undesirable in food production.

The full version of this BfR opinion is available in German on <http://www.bfr.bund.de/cm/343/gesundheitliche-bewertung-von-erfrischungsgetraenken-mit-zugesetzten-bromierten-pflanzenoelen.pdf>