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## The entry of perchlorate into the food chain should be reduced

Updated BfR Opinion No 006/2018 of 15 February 2018

Perchlorates are salts of perchloric acid  $\text{HClO}_4$ . Perchlorate occurrences in the environment are mainly of anthropogenic origin, i.e. they are caused by humans, although perchlorate can also occur naturally in mineral storage sites in several countries. Perchlorate has never been approved as a pesticidal or biocidal active substance in the European Union. According to the latest findings, the main entry path is probably the contact of foods – in the course of their production and/or processing – with water which has been treated previously with chlorinated biocidal products for disinfection purposes. Perchlorate can occur as a by-product of disinfection when used in this way.

Exposure to perchlorate can lead to inhibited iodine intake in humans. The European Food Safety Authority (EFSA) has derived a tolerable daily intake (TDI) of 0.0003 milligrams (mg) of perchlorate per kilogram (kg) body weight based on impaired iodine intake in healthy adults. In its opinion, EFSA comes to the conclusion that long-term exposure to perchlorate can give cause for concern with regard to resulting health risks, especially for younger population groups with high intake quantities and a simultaneous slight to moderate iodine deficiency. In addition to this, perchlorate can pose a health risk to infants breastfed by mothers with an iodine deficiency. As with small children with an undersupply of iodine, this applies after only two to three weeks' (short-term) exposure to perchlorate. As acute health risks through the one-time intake of perchlorate in food are unlikely, according to EFSA, an acute reference dose (ARfD) was not derived. The German Federal Institute for Risk Assessment concurs with EFSA's toxicological assessment of perchlorate.

As perchlorate is not covered by Regulation (EC) No. 396/2005, no maximum residue levels in foods have been established up to now. Perchlorate levels in foods should be kept as low as possible and should follow the ALARA (as low as reasonably achievable) principle.

The BfR recommends that efforts be made to reduce the entry of perchlorate into the food chain, and therefore the consumer exposure. Consumers should not fundamentally change their eating habits, however, as the health benefits of fruit and vegetables remain undisputed.

The full version of this BfR opinion is available in German on <http://www.bfr.bund.de/cm/343/der-eintrag-von-perchlorat-in-die-nahrungskette-sollte-reduziert-werden.pdf>

### More information on the subject of perchlorate at the BfR website

FAQ about perchlorate:

[http://www.bfr.bund.de/en/frequently\\_asked\\_questions\\_about\\_perchlorate\\_in\\_food-188608.html](http://www.bfr.bund.de/en/frequently_asked_questions_about_perchlorate_in_food-188608.html)



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*This text version is a translation of the original German text which is the only legally binding version.*