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## **Studies confirm safety of antimony trioxide's use as catalyst in PET bottles**

Antimony trioxide (ATO) has been the subject of more than 12 years of concerted science from expert toxicologists representing national and international government safety bodies such as the WHO and the Japanese health ministry concluding that antimony trioxide use as a PET catalyst is safe for human health<sup>1</sup>.

Although we have not yet been given the possibility to review the raw data serving as the basis of a recent report by Prof. Shotyk<sup>2</sup>, the trace levels of antimony migrating from PET bottles identified are all in line with previous data and are well below the established safe limits for food and water set by the WHO and the Japanese guidelines established in 2003<sup>3</sup>.

ATO is the major catalyst for the production of PET plastic used in the packaging of a wide range of drinks and waters. PET continues to prove itself as one of the excellent materials for the safe containment and distribution of a range of liquids. PET has a history of safe use by millions of consumers every day. Consuming water and other drinks from a PET bottle is completely safe.

ATOS is uniting producers and users of antimony trioxide which was established to develop the scientific information needed for the antimony trioxide EU Risk Assessment.

For more information, please see [www.iaoia.org](http://www.iaoia.org) or contact Karine Van de Velde, IAOIA's secretary-general at [kvdv@iaoia.be](mailto:kvdv@iaoia.be).

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<sup>1</sup> ATO has been subject of a toxicological review by the WHO ([World Health Organisation](http://www.who.org)) in 2003 in which, following an extensive review of the latest scientific data, the WHO guideline value was increased from 5 µg/l to 20 µg/l in drinking water, reflecting increased margins of consumer safety. A guideline value is defined as the concentration of a constituent that does not result in any significant risk to health over a lifetime of consumption. The WHO has also noted that this guideline value of 20 µg/l might be highly conservative, because of the large uncertainty factor of 1000 that was used.

<sup>2</sup> Contamination of Bottled Waters with Antimony Leaching from Polyethylene Terephthalate (PET) increases upon Storage; William Shotyk and Michael Krachler; Institute of Environmental Geochemistry, University of Heidelberg, INF 236, D-69120 Heidelberg, Germany; Environ. Science & Technology; 24 January 2007

<sup>3</sup> Maximum migration from PET packages under the most severe or unusual circumstances would be typically less than 1 µg/kg of packaged goods. Assuming a daily consumption of 3 kg of foods, all packaged in PET, the intake of antimony would be less than 3 µg/day, i.e., less than one hundredth of the tolerable daily intake standard of 360 µg per day for an individual weighing 60 kg. The real ratio would be even lower, because of the highly conservative uncertainty factor of 1000 that was used for this calculation and of the very conservative assumptions for dietary intake. The amount migrating from PET packaging is far less than the guideline value of 20 µg/l or 20 ppb, derived by WHO for the drinking water. The Japanese drinking water guideline is 15 µg/l (related to the lower body weight factor used for Japanese people – 50 kg instead of 60).