

Advice 18-2014 of the Scientific Committee of the FASFC on acrylamide intake of the Belgian population – revision.

The Scientific Committee has already evaluated the acrylamide (AA) intake of the Belgian population a first time, based on the FASFC control results reported between 2002 and 2007 (Sci Com advice 25-2008). To determine whether the various initiatives that have been taken to reduce the AA content in food have had an impact, the AA intake is re-evaluated in this opinion based on the FASFC control results obtained between 2008 and 2013.

A comparison of the AA levels measured between 2002-2007 and between 2008-2013, shows a significant decrease of the AA content of crisps and gingerbread. Although a significant decrease is also observed for the mean AA levels of cereals, bread & rolls, chocolate and baby biscuits, this decrease seems less important. In contrast, the AA content of coffee and paprika powder increased significantly, and the AA level of coffee substitute and fries seems to show a rising, although not significant, trend as well. The percentage of samples for which the AA content exceeds the indicative value recommended by the EC (EC Recommendation 2013/64 / EU), follows a similar trend and ranges between 2 and 28%, depending on the food category.

Since 2008, the AA intake appears to have declined a little, but not significantly. Based on the pooled data from 2008 to 2013, the average AA intake of adults, adolescents and children varies between 0.33 and 0.72 µg/kg bw per day and the 97.5 percentile between 1.50 and 3.23 µg/kg bw per day. In this intake estimation, the effect of a possible modified consumption pattern could not be accounted for. As such, the changes observed regarding the relative contribution of different food products to the intake mainly reflect the changes observed in the AA levels.

For neoplastic effects (BMDL₁₀= 0.17 mg/kg bw per day), the mean intake of children, adolescents and adults corresponds to a margin of exposure (MOE) varying between 515 and 236 and the P97.5 intake corresponds to an MOE between 113 and 53. Such low MOE values for a genotoxic carcinogen, the level of which should in principle be as low as reasonably achievable (i.e. the ALARA principle), indicate that additional measures are essential for reducing the AA content in food.

In the advice, a number of recommendations are given regarding monitoring and research, as well as for food business operators and the consumer. For instance, adequate final baking conditions of French fries are a prerequisite for keeping the AA content as low as possible.

The full text is available on this website in dutch and in french, respectively under the section “Wetenschappelijk Comité/Adviezen” and “Comité scientifique/Avis”.