

Rapid advice 17-2013 of the Scientific Committee of the FASFC on the presence of perchlorate in leafy vegetables grown in glasshouses

Following the detection of a number of higher perchlorate levels in vegetables and fruits, the 'Standing Committee of the Food Chain and Animal Health' (SCoFCAH) of the European Commission established a reference level for perchlorate (i) in citrus fruits, pome fruit, root and tuber vegetables, table grapes, spinach, melons and watermelons of 0.2 mg/kg, (ii) in leafy vegetables (exc. spinach), fresh herbs and celery grown in glasshouses/under cover of 1.0 mg/kg and (iii) in all other foods, fruits and vegetables of 0.5 mg/kg. The Scientific Committee is asked whether higher reference values for leafy vegetables and spinach grown in glasshouses are acceptable from a public health point of view.

The European reference values are based on the JECFA (Joint FAO/WHO Expert Committee on Food Additives) 'provisional maximum tolerable intake' (PMTDI) of 0.01 mg/kg bw per day, whereas the U.S. EPA (Environmental Protection Agency) applies a much lower toxic reference dose RfD of 0.0007 mg/kg bw per day, which implies some caution or prudence when evaluating the risk. The uncertainty in the risk characterization is further increased due to, amongst others, the fact that in addition to fruits and vegetables, other relevant sources of exposure (may) exist (e.g. drinking water) and that data regarding the presence of perchlorate in different foods are limited.

Based on a worst case estimate of the total exposure of adults (15 years and older) and preschool children (2.5-6.5 years old), the margin to increase the European reference values for leafy vegetables and spinach appears to be small, although such an increase would only concern leafy vegetables and spinach grown in glasshouses and would be of a temporary nature.

Finally, the Committee wishes to emphasize that permanent actions should be undertaken to limit the perchlorate contamination of fruits and vegetables (e.g. by choice of fertilizers, irrigation).

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