

## **Advice 07-2009 of the Scientific Committee of the FASFC: Lead and nickel in coffee**

During controls executed by the FASFC problems were observed with certain coffee machines that are used in the catering industry. Tests showed that lead and nickel are released from the machines. Based on the analyses that are executed with the machine using water in bottles, without adding coffee, concentrations of lead and nickel were determined that were up to 79,5 µg Pb/l and 1000 µg Ni/l for the coffee exits and 947 µg Pb/l and 316 µg Ni/l for the steam exits. It is asked to the Scientific Committee whether the measured concentrations of nickel and lead are a risk for public health.

The Scientific Committee made an estimation of the lead and nickel intake when coffee or cappuccino, made with the specific machine, are consumed. A study of the scientific literature showed that scientific uncertainty exists concerning the TDI (Tolerable Daily Intake) of lead and nickel and the level of exposure of the Belgian population through other foods. As a consequence, the Scientific Committee prefers by way of precaution, to support his decision-making on the worst case severe scenario (a TDI of 3,6 µg/kg bw/day and a level of exposure of 2,98 µg/kg bw/day for lead and a TDI of 5 µg/kg bw/day and a level of exposure of 3,85 µg/kg bw/day for nickel).

Based on the available data and the exposure assessments, the Scientific Committee can decide that when the considered coffee machines are used and the exposure through other foods is taken into account, an exceeding of the TDI is possible for both lead and nickel. Furthermore, the Scientific Committee wishes to draw the attention to the considerable contribution of coffee to the TDI for the higher percentiles of coffee consumption. Moreover for the exposure through other foods, the mean value for the population was used, which implies that the exposure and consequently the risk for certain parts of the population is larger than what was calculated. On the other hand, the calculations were executed with the highest reported concentrations of lead and nickel, which gives probably rise to an overestimation of the exposure and consequently of the risk. Based on this information, the Scientific Committee decides that possibly a risk for public health exists when the considered coffee machines are used.

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