

Advice 17-2020 of the Scientific Committee established at the FASFC on action limits for chemical contaminants in food : furans

Background and terms of reference

The Scientific Committee (SciCom) has been asked to propose action limits for furan in vegetable juices, fruit juices, tomato sauce, canned soups, coffee, instant coffee, soy sauce, instant chicory, baby food jars, cereal products (breakfast cereals, biscuits, crackers, Swedish breads) and potato chips.

Currently, a proposal is being done at European level on drafting recommendations for the mitigation of furan in food.

Method

The SciCom calculated estimated accepted concentrations (EAC) on the basis of scientific data. An EAC is a risk-based concentration limit that corresponds to the concentration of a substance a food may contain without the exposure to the substance through the high consumption of that food posing an appreciable risk or a concern for public health. The calculated EAC's can serve as a basis for the risk manager to establish action limits (opinion 15-2019, SciCom).

According to the opinion 15-2019, the SciCom has calculated a "low health concern intake" by dividing a BMDL10 (BenchMark Dose for which an increased incidence of the toxic effect of 10% is observed) of furan by the theoretic Margin of Exposure (Margin of Exposure UF, MoE_{UF}). This "low health concern intake" was then divided by the P97.5 consumption data for each foodstuff considered to calculate the EAC's. These values were rounded according to mathematical rules.

Results

The EAC's for furan in foodstuffs of interest are shown in the table below.

Foodstuff(s)		EAC ($\mu\text{g}/\text{kg}$)
Baby food jars		4
Coffee (ground or beans)		1 000
Instant coffee (powder)		40 000
Instant chicory (powder)		20 000
Vegetable juices		20
Fruit juices		70
Tomato sauce		50
Canned soups		15
Soy sauce		300
Cereal products	Breakfast cereals	40
	Biscuits	40
	Crackers	100
	Swedish breads	100
Potato chips		70

Conclusions

The SciCom calculated EAC's for furan in foodstuffs of interest. The EAC's can be used as action limits. The actions, applied when these limits are exceeded, are determined by the risk manager.

Recommandation

The SciCom recommends paying a particular attention of furan in infant foods, coffee and soups. For these foodstuffs, it is also recommended that operators identify and implement measures to mitigate furan formation.

The full text is available on this website in dutch and in french.