

Minutes' statement of the Scientific Committee on Food on precursors of hydrocyanic acid in flavourings and other food ingredients with flavouring properties

(expressed on 4 April 2003 at its 137th plenary meeting, corresponding to item 8.2. of the agenda)

8. Flavourings

8.2. Hydrocyanic acid. Draft Statement

The Committee is asked to advise the Commission on substances used as flavourings or present in flavourings or present in other food ingredients with flavouring properties for which existing toxicological data indicate that restrictions of use or presence might be necessary to ensure safety for human health. In particular, the Committee is asked to advise the Commission on the implications for human health of hydrocyanic acid (HCN) in the diet.

Hydrolytic enzymes (β -glycosidases) are capable of liberating HCN from cyanogenic glycosides. Enzymic hydrolysis can occur as a result of the release of β -glycosidases following maceration of plant tissues, or by the gut microflora after ingestion. Hydrolysis liberates the corresponding aglycone, which further breaks down non-enzymically to HCN and the respective carbonyls.

On the basis of a draft working document the Committee considered both experimental animal data and several epidemiological studies in cassava-eating populations exposed to high levels of the cyanogenic glycoside linamarin. However, overall the data were not considered adequate to establish a numerical NOEL or TDI in humans for chronic exposure to HCN.

The Committee concluded that the current exposure to cyanide from flavouring ingredients would not give rise to acute toxicity. However, in view of the lack of adequate data on chronic toxicity, the Committee supports the continued application of limits to the levels of total HCN in foods.