Scientific opinion on the acute health risks related to the presence of cyanogenic glycosides in raw apricot kernels and products derived from raw apricot kernels - DTU Orbit

Amygdalin is the major cyanogenic glycoside present in apricot kernels and is degraded to cyanide by chewing or grinding. Cyanide is of high acute toxicity in humans. The lethal dose is reported to be 0.5–3.5 mg/kg body weight (bw). An acute reference dose (ARfD) of 20 µg/kg bw was derived from an exposure of 0.105 mg/kg bw associated with a non-toxic blood cyanide level of 20 micro mol (µM), and applying an uncertainty factor of 1.5 to account for toxicokinetic and of 3.16 to account for toxicodynamic inter-individual differences. In the absence of consumption data and thus using highest intakes of kernels promoted (10 and 60 kernels/day for the general population and cancer patients, respectively), exposures exceeded the ARfD 17–413 and 3–71 times in toddlers and adults, respectively. The estimated maximum quantity of apricot kernels (or raw apricot material) that can be consumed without exceeding the ARfD is 0.06 and 0.37 g in toddlers and adults, respectively. Thus the ARfD would be exceeded already by consumption of one small kernel in toddlers, while adults could consume three small kernels. However, consumption of less than half of a large kernel could already exceed the ARfD in adults.