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# **Food & Beverages**

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## **Variations in acrylamide levels in French fries prepared from fresh potatoes available in the Spanish market**

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**A**crylamide is a process contaminant generated in several foods during cooking as a consequence of the Maillard reaction. Processed potatoes are one of the main sources of exposure to acrylamide in the diet, French fries and potato chips contributing 56% of the total acrylamide intake in the Western diet of the adolescents. In the present study the acrylamide content of French fries prepared from fresh potatoes available in Spanish markets was determined. Eighteen different batches of fresh potatoes with the label of "special to fry" were randomly purchased and fried in sunflower oil following two steps: 150°C for 4 minutes and 180°C for 2 minutes (Spanish normative for French fries production). Acrylamide content ranged from 24.7 to 2444 µg/kg, potatoes from Agria variety presenting lower levels (24.7-237 µg/kg) than those from Monalisa, Caesar and Milva (1216-2444 µg/kg). Reducing sugars content in the fresh potatoes ranged from 0.9 to 27.6 mg/g, most of the values exceeding the 3 mg/g recommended for potatoes intended for frying. A significant correlation between sugars and acrylamide formation after frying was found. Sugar content is associated with potato variety but also with storage conditions before processing, since cold temperature increases sugar levels in the tuber. It could be suggested that the storage conditions were different for all the samples, determining then the levels of reducing sugars and, consequently those of acrylamide in the French fries. In conclusion, an adequate selection of fresh potatoes is crucial to control acrylamide formation during frying and therefore exposure to this contaminant through the consumption of French fries.

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## **BevWise A100W – the whey protein solution for high acid beverages**

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**T**he functional beverages market continues to grow, with innovative formats and health benefits being developed continuously through new product launches. The majority of functional beverages currently available tackle three nutritional requirements: energy and fuel, recovery through protein and isotonic vitamins and minerals for improved performance. While consumers recognise the value of incorporating protein and vitamins and minerals in their diet, formulating beverages with protein and other nutritional ingredients can present various challenges if they are not processed correctly. Glanbia's expertise lies in helping customers find the right solutions to fit their applications. At Glanbia Nutritionals, we offer the BevWise A-100 series, a range of functionalised whey protein isolates formulated to ensure optimum protein delivery and flavor expression in protein fortified beverages. The ingredients are designed to overcome the challenges associated with acidic beverages, where manufacturers seek an improved flavor profile. Glanbia also has a comprehensive vitamin and mineral portfolio which offers the customer highly effective fortification opportunities which can be easily incorporated into formulations.

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