Microwave pre-cooking of chips reduces cancer chemicals

October 31 2006

Microwaving your chips before you fry them reduces the levels of a cancer-causing substance, reveals findings published today in the SCI's *Journal of the Science of Food and Agriculture*.

The discovery of acrylamide - a possible carcinogenic in humans – has led to much research being done to investigate the benefits of alternative cooking methods. Acrylamide forms during processes such as frying, baking and roasting where high-temperature and low-moisture conditions exist.

Although numerous studies have been conducted to explore the possibilities of reducing acrylamide levels in French fries, a team of researchers from Turkey has shown that by reducing the frying time and hence the acrylamide formation by microwave pre-cooking of potato strips prior to frying.

Publishing their work in the *Journal of the Science of Food and Agriculture*, the researches showed that microwave application prior to frying resulted in a marked reduction of the acrylamide level in the surface region. When the potato strips were subjected to frying after a microwave pre-cooking step, acrylamide content in the whole potato strip was reduced by 36%, 41% and 60% for frying at 150, 170 and 190^{o}C respectively.

"Microwaving French fries before cooking takes little time and in fact, microwave pre-cooked samples fried to the same degree of cooking

appeared to have a more acceptable colour, probably due to the more gentle heat treatment they experienced during frying," says lead author Koray Palazoglu, of the University of Mersin, Turkey.

Source: John Wiley & Sons