

The Inhibitory Role of Nacl and Kcl on Acrylamide Formation in Potato products

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Abstract: This paper investigated the efficiency of Nacl and Kcl on the reduction of acrylamide in potato products and summarized the optimal levels of additives. Seven experimental groups including a control group were organized for all of additives. Potato chips were made via traditional processing technology. The potato was mixed with different levels (0.1-1 mmol) of them, respectively. The acrylamide level in potato chips was determined by Gas chromatography (GC/MS). Results showed that nearly 58% and 42% of acrylamide were reduced when the Nacl and Kcl addition levels were 1 g/kg, respectively. The elevated inhibitory effects of them on the acrylamide formation were achieved with an increase of additive levels unless the spiking levels of Nacl and Kcl were greater than (0.1-1 mmol) of them, respectively. The present study indicated that Nacl and Kcl could significantly reduce the acrylamide content generated in potato chips and keep original flavor and crispness of potato chips.

Key words: Acrylamide, potato products, reduction, Nacl and Kcl