

Thesis Title	Inhibition of Reducing Sugar Formation in Potato by Microwave Heating
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Abstract

The defected color in potato chips especially red-brown color, call “mottling” which caused by more accumulation of reducing sugar content. It was called maillard reaction. The study was tested to reduce an accumulation of reducing sugars by inactivation of invertase enzyme. The materials that provide by correspondence with Pepci-co Co.Ltd. were fresh potatoes (Atlantic cultivars).The Statistical method of the experiments was analyzed by Response Surface Methodology (RSM) to find the optimum point which provide the minimum point of reducing sugar contents and total different color (ΔE) in potato chips. The main purpose were studied from 3 factors including 1) time of storage (1-5 Days) 2) time of Microwave heating (60-180 seconds) and 3) temperature for heating (55-65 °c). The result showed that the optimum condition (minimum point) of reducing sugars content is 24 hours, 60 seconds and 55.2 °c and minimum total different color (ΔE) is 32 hours, 171 seconds and 64.4 °c respectively.