



Content of amylose, amylopectin, vitamin B (B₁ and B₂), iron and phosphorus in various corn varieties in Loei Province

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The aim of this research was to determine the content of amylose and amylopectin, vitamins B (B₁ and B₂), iron and phosphorus in corn seed samples. Five varieties of corn samples were studied including of sweet corn, waxy corn, field corn, maize troy purple corn and kaw pod tak ngai (local corn of (cultivated in Dansai District) Loei Province). All of corn samples were The results showed that the contents of amylose ranged from 2.27 (field corn) to 15.75 % (sweet corn). The contents of amylopectin were in range of 84.25 (sweet corn) to 97.73% (field corn). The contents of vitamin B₁ and B₂ were determined by High Performance Liquid Chromatography (HPLC). The results showed that the contents of vitamin B₁ ranged from 217.21 (kaw pod tak ngai) to 593.09 mg/kg (field corn). The contents of vitamin B₂ were found in range of 52.93 (field corn) to 140.63 mg/kg (sweet corn). The highest contents of iron and phosphorus were 402.29 mg/kg in field corn and 156.10 mg/kg in sweet corn, respectively. The detection limit, quantitation limit, percentage of recovery and relative standard deviation (RSD) values remained acceptable. All of corn samples have different content of amylose, amylopectin, vitamin B (B₁ and B₂), iron and phosphorus which depend on varieties of corn and corn planting process.

Keywords: Amylopectin; Amylose; Corn; Iron ; Phosphorus; Vitamin B₁; Vitamin B₂