

ABSTRACT

EFFECTS of VARIOUS COOKING PROCESS of *Vigna unguiculata* (L.) Walp. on PHYTOSTEROL COMPOSITION

Gita Deseria

The aims of this study were to investigate the effects of various processing methods between raw and processed cowpea beans (*Vigna Unguiculata* (L.) Walp.) by boiling and frying on the composition of phytosterol contained in beans. The cooked beans were extracted with *n*-hexane, acetone, and chloroform. The results of the extract were analyzed using TLC, FTIR-ATR, GC-FID, and GC-MS. The results of TLC and FTIR-ATR analysis showed that cowpea beans had a phytosterol compound. The results of GC-FID analysis showed that boiling process was showing composition of cholesterol, stigmasterol, campesterol, and β -sitosterol. In the fried cowpea beans only stigmasterol and β -sitosterol was detected. the result of SIM (Selected Ion Monitoring) mode of GC-MS analysis on *n*-hexane extract of the raw and boiled beans showed the same phytosterol composition (cholesterol, stigmasterol, campesterol, and β -sitosterol. Based on Gamess-Howell test showed the different processing effects on phytosterol in cowpea beans. Cooking process will affect the composition of phytosterol.

Keyword: *Vigna Unguiculata* (L.) Walp., Cowpea, Phytosterol composition, Cooking process, Gas chromatography

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