

Determination of Phytosterol in Serial Grains

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Abstract : Ten cereal grains that usually used as ingredients in healthy products were studied for phytosteryl glucoside contents. β -sitosteryl glucoside in 10 cereal grains, including Phasecolus vulgaris L. (kidney bean), Sorghum bicolor (sorghum), Moringa oleifera Lam. (drumstick), Nelumbo nucifera (lotus), Vigna radiate L. (mung bean), Coix lacrymajobi (job'tears), Oryza sativa. (red rice), Glycine max L. Merrill. (soybean), Cucurbita maschata Decne (pumpkin) and Helianthas annuus (sunflower seeds), were analyzed using Thin-layer chromatography (TLC) and High-Performance liquid chromatography (HPLC). All grains were extracted with methanol before analysis. Red bean showed the maximum phytosteryl glucoside content of 0.42% w/w. The content of others were as follows: pumpkin seed 0.173%, mung bean 0.099 %, soybean 0.07%, dried moringa seed 0.067%, lotus seed 0.044%, sorghum 0.032%, sunflower seed 0.016%, Job's tears 0.012%, and brown rice 0.006%.

Keywords : cereal grains, phytosterol, β -sitosteryl glucoside, food analysis.

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