Czech Journal of FOOD SCIENCES

Table of Contents

Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Food Sci.

Ali M.A., Sayeed M.A., Reza M.S., Yeasmin

Mst.S.; Khan A.M.: Characteristics of seed oils and nutritional compositions of seeds from different varieties of *Momordica charantia*Linn.cultivated in Bangladesh

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Farmers in rural areas of almost all the districts of Bangladesh cultivate different varieties of edible plant karela to satisfy nutritional requirements. Herein, we report on the characteristics of seed oils and nutrients and mineral contents of seeds from three varieties of karela. Most of the physicochemical characteristics were significantly ($P < 0.05$) affected with the samples tested. Seed oils of all varieties displayed a higher degree of unsaturation and in GLC reported herein, only five fatty acids were identified. The profiles of fatty acid composition were not wholly similar in all varieties in which

unsaturated fatty acids represented more than 72%, α-eleostearic acid having been detected in the amount of 50.36 – 53.22%. Acylglycerol classes were estimated to be monoacylglycerols (1.18 – 2.01%), diacylglycerols (1.83 – 2.98%), and triacylglycerols (91.11 – 93.03%) whereas lipid classes included neutral lipids (86.83 – 91.09%), glycolipids (4.37 – 7.43%), and phospholipids (3.22 – 4.62%). Of the major energy producing nutrients, all varieties contained large amounts of lipid (33.93 – 36.21%) and protein (18.23 – 21.36%), and potentially useful amounts of calcium (383.45 – 440.96 µg/g), iron (41.10 – 45.03 µg/g), and other essential minerals. The nutrient information presented in this report should stimulate the local public health authorities in Bangladesh to consider the question of recommending the vegetable karela to be consumed by adults and children alike in Bangladesh, including pregnant women and others with higher than normal nutritional requirements.

Keywords:
karela; seed oil; fatty acid; mineral content

[fulltext]