

Scopus



Back to results | 1 of 1

[Export](#) | [Download](#) | [Add to List](#) | [More...](#)

International Medical Journal Malaysia

Volume 15, Issue 1, 2016, Pages 75-80

[Open Access](#)

Quantification of anti-fertility compound-Diosgenin concentration in the fenugreek seeds aqueous extract (FSA) (Article)

Ahmed Kaid, N.A.^a, Norbairiyah, M.B.^a, Imad, M.A.^a, Norazian, M.H.^b^a Department Basic Medical Science (BMS), Kulliyah of Medicine (KOM), International Islamic University Malaysia (IIUM), Kuantan, Malaysia^b Kulliyah of Pharmacy, IIUM, Kuantan, Malaysia[View references \(21\)](#)

Abstract

Introduction: This study aims to build a standardization method for preparation of effective powder from FSA and to quantify diosgenin in FSA. **Methodology:** One kg of FS were used in this study. **Setting:** BMS, KOM and KOP, IIUM Kuantan campus. FS were washed with distilled water to exclude any foreign matter, and were then air dried. FS-powder were put in distilled water in a ratio of 1 g of powder in 20 ml of distilled water and were shaken at room temperature for 24 hours. Ten mg of hydrolyzed extract sample was diluted in 10 ml volumetric flask with methanol for 15 minutes. Chromatographic estimation was performed using an equilibrated reverse phase Eclipse XDB-C18 column (particle size 5 µg, 4.6 mm x 150 mm). **Results:** One gram of FSA extract was hydrolyzed to produce saponin and 46.6% was recovered. A calibration curve that was constructed based on five dilutions of diosgenin standard at concentrations of 2, 5, 10, 20, 30 and 50 ppm produced a linear graph ($r = 0.999$). The concentration of diosgenin in FSA extract as calculated using the regression analysis was found to be 29.66 µg/ml, 13.81 % w/w on dried weight basis. **Conclusion:** Preparation and standardization of effective powder from FSA are the corner stone of many scientific researches in IIUM and Malaysia. Diosgenin is available in the FSA in adequate concentration. The adequate amount of diosgenin in the FSA will guide us to do further study in the way of preparation of a natural product that can be used in the field of reversible anti-fertility therapy.

Author keywords

Anti-fertility; Diosgenin; FSA

ISSN: 18234631 Source Type: Journal Original language: English

Document Type: Article

Publisher: International Islamic University Malaysia

References (21)

[View in search results format](#) All [Export](#) | [Print](#) | [E-mail](#) | [Save to PDF](#) | [Create bibliography](#) Raju, J., Mehta, R.1 [Cancer chemopreventive and therapeutic effects of diosgenin, a food saponin](#)(2009) *Nutrition and Cancer*, 61 (1), pp. 27-35. [Cited 73 times.](#)

doi: 10.1080/01635580802357352

[View at Publisher](#) McAnuff, M.A., Harding, W.W., Omoruyi, F.O., Jacobs, H., Morrison, E.Y., Asemota, H.N.2 [Hypoglycemic effects of steroidal saponins isolated from Jamaican bitter yam, Dioscorea polygonoides](#)(2005) *Food and Chemical Toxicology*, 43 (11), pp. 1667-1672. [Cited 62 times.](#)

doi: 10.1016/j.fct.2005.05.008

[View at Publisher](#) Son, I.S., Kim, J.H., Sohn, H.Y., Son, K.H., Kim, J.-S., Kwon, C.-S.3 [Antioxidative and hypolipidemic effects of diosgenin, a steroidal saponin of yam \(Dioscorea spp.\), on high-cholesterol fed rats](#)(2007) *Bioscience, Biotechnology and Biochemistry*, 71 (12), pp. 3063-3071. [Cited 109 times.](#)

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert](#)[Set citation feed](#)

Related documents

Oral contraceptives

Jin, J.

(2014) *JAMA - Journal of the American Medical Association*

Computational systems pharmacology and docking explored diosgenin targets causal and effectors pathogenic signalling network of vascular calcification

Manivannan, J., Barath Kumar, T.R., Arunagiri, P.

(2013) *Journal of Chemical and Pharmaceutical Research*

Densitometric analysis of diosgenin in methanolic extracts of Allium ursinum collected at different times during plant development

Sobolewska, D., Janeczko, Z., Podolak, I.

(2009) *Journal of Planar Chromatography - Modern TLC*[View all related documents based on references](#)

Find more related documents in Scopus based on:

[Authors](#)[Keywords](#)

Metrics

3

Mendeley Readers

35TH PERCENTILE

[View all metrics](#)