



Blood Sugar Lowering Potentials of Aqueous and Ethanol Extracts of the Mixture of Rinds of *Citrullus vulgaris* Schrad (Watermelon) and *Chrysophyllum albidum* G. (Udara) Fruits on Alloxan-Induced Diabetic Wistar Rats

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Authors' contributions

This work was carried out in collaboration between both authors. Author OJG designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author BSJ managed the analyses of the study and the literature searches. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JPRI/2020V32I2130755

[Editorial:](#)

(1) Dr. Mohamed Fathy Mohamed Ibrahim, Faculty of Pharmacy, Assiut University, Assiut, Egypt.

[Reviews:](#)

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(2) Adegbite Adesola Victor, Ladoke Akintola University of Technology, Nigeria.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/50033>

Received 12 May 2019

Accepted 18 July 2019

Published 04 September 2020

Original Research Article

ABSTRACT

Citrullus vulgaris Schrad, commonly known as "watermelon" and *Chrysophyllum albidum* G., commonly called "Udara" are two important plants known to possess high antioxidant and therapeutic properties especially antidiabetic properties. The present study is aimed at investigating the blood glucose lowering potentials of both the aqueous and ethanolic extracts of the mixture of rinds of *C. vulgaris* Schrad and *C. albidum* in normal and alloxan-induced-diabetic rats. Aqueous and ethanol rinds extracts of the mixture were administered in wistar albino rats of weight range of 150-200g to determine their blood glucose lowering activity. The oral administration of aqueous mixed rinds extracts at dose of 1500 mg/kg body weight (Group 4) for 9 days led to a highly significant blood glucose reduction at $P < 0.05$ when compared to the diabetic control (Group 2) and

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James and Simon Jnr; JPRI, 32(21): 86-90, 2020; Article no. JPRI.50033

the ethanol mixed rinds extracts at the same dose (Group 6). There was a significant reduction in blood glucose ($P < 0.05$) by other group dose extracts (Groups 3, 5 and 6) compared to diabetic control. Hence, aqueous mixed rinds extracts of *Citrullus vulgaris* Schrad and *C. albidum* might be recommended as a potential hypoglycemic drug in the treatment of diabetes mellitus.

Keywords: Antihyperglycemic activity; hypoglycaemic; antidiabetic; alloxan; diabetes mellitus; phytochemical; acute toxicity; metformin; aqueous; ethanol; *Citrullus vulgaris* Schrad; *C. albidum*.