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NOTES

Investigation on *Garcinia Indica* Seed Oil

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In the present work, the authors investigated the properties of *Garcinia indica* seed oil.

In our efforts to screen the seed oils from the non-traditional species of Madhya Pradesh (India) with the expectation that the derived fatty acids might have commercial potential, *Garcinia indica* (Guttiferae)[1] was investigated. The coarsely powered seeds (collected locally and identified from the Botany department of this university) were extracted with petroleum ehter (60–80°C) in a soxhlet, and the oil was purified over charcoal. Physico-chemical value[2–3] were determined [sp. gr. (28°C) 0.8694, acid value 9, 6, iodine value 38.1, sap. value 224.4]. After saponification[4] of the oil, the saponifiable and non-saponified contents were separated. The mixed fatty acids from the saponified part were further resolved into saturated and unsaturated acids. These acids were *trans* esterified (methanol/mild acid) and the esters analysed by GC, using SE 30 column (temp. 200°C), FID detector and N_2 carrier gas, 18 : 1 and 18 : 2 acids have been found to be the major constituents. In saturated acids 18 : 0 acids has been the prominent one, followed by 16 : 0, 12 : 0 and 20 : 0 acids. The oil did not show presence of any unusual function as tested by spectroscopic (UV, IR), chromatographic (picric acids, TLC) and Halphen tests. The nonsaponifiable fraction (1.2%) gave positive Liebermann-Burcharad test and contained β sitosterol as identified by TLC[5] (pet-ether : ethyl acetate, 90 : 10) and IR (λ_{max} (KBr) 3300 ~ 3400 (OH), 1639 (>C = CH–), 957 (cyclohexane). The oil was found non-toxic but repellent[6]—may be due to the sterol content, when tested against domestic virmin—*Periplenata americana*. The activity was composed with a known insecticide (Baygon). The present work indicates that the oil rich species of *Garcinia indica* can be a good source of 18 : 1 acids (oleic acids) if properly evaluated for its agronomy. The oil could be a natural source of 18 : 2 acids (linoleic acids) and this is significant since 18 : 2 is a crucially importance essential fatty acid required but not synthesized by animals.

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