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### Evaluation of phytochemical, antioxidant, protein profiles and gas chromatography analysis of fatty acids in different species of jackfruit seeds

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Jackfruit is a popular fruit crop, widely grown in India and other tropical areas. The ripe fruit contains well flavored, yellow sweet bulbs and seeds. Seeds make up around 10% to 15% of the total fruit and have high carbohydrate, protein content along with lipid. There have been few studies on Jackfruit seed oil and relatively no studies upon the characterization of lipid content and protein profiling. We analyze for the work on seed oil to perform characterization of the oil and its lipid composition by gas chromatography. The initial extraction process includes the Soxhlet extraction with the organic solvent hexane. The obtained oil sample was evaluated for physico-chemical properties and proximate analysis like saponification, iodine, acid and peroxide, Reichert-Missel, Polensky values. In present study fatty acid profile was analyzed by comparing Retention time of gas chromatogram peaks of *Artocarpus heterophyllus*, *Artocarpus integrifolia*, *Artocarpus hirsitus*, *Artocarpus inciscus* and *Artocarpus integer* with that of standard mixture chromatogram peak retention times. The study aimed at revealing the potentials of unknown and less known seed oils, which could help to compare with popular vegetable oils. Inference from the present study is that all the five varieties of Jackfruit seeds possess significant range of the phytochemicals and enzymatic antioxidants. Hence it is conspicuous that, of all the plant varieties A. exhibited significant antioxidant capacity conferred to significant levels of enzymatic antioxidants and phytochemical compounds. Since it was reported that plant with more phytochemical bioactive phenolic compounds exhibit a wide spectrum of pharmacological effects as reported earlier, that the consumption of phenolic rich food or beverages and prevention of diseases.

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