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Editorial

African Eggplant as a Functional Food Ingredient

Tolulope Adebile*

Department of Food Science and Technology, Bowen University, Iwo, Osun State, Nigeria

***Corresponding Author:** Tolulope Adebile, Department of Food Science and Technology, Bowen University, Iwo, Osun State, Nigeria.

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This article is a mini-review that reveals the potential benefits of African Eggplants (*Solanum macrocarpon* L. and *Solanum aethiopicum* L.) as functional ingredients in the food industry. Recent developments show a change in consumer food choices: unlike in the past, consumers are now more interested in eating healthy and nutritious foods. Hence, the shift towards functional foods by the food industry and professionals.

A functional food is one that has health benefits in addition to its nutritional value. Such foods comprise bioactive compounds or phytochemicals that are obtainable from several sources, including food processing waste, inorganic raw materials, fresh produce, microbes, and others [1]. Bioactive compounds are also found in fruits and vegetables and are commonly present as flavonoids, carotenoids, vitamins, and other phenolic constituents [2].

The *Solanum macrocarpon* L. species or Gboma eggplant and the *Solanum aethiopicum* L. species or Scarlet eggplant are often referred to as the wild relatives of *Solanum melongena* [2]. They are agricultural produce native to Africa and are some of the most cultivated vegetables with higher values in tropical Africa. African eggplants are grown for their fruits and leaves and are consumed raw or as soup condiments.

Interestingly, prior research has shown these Solanum species to be a great source of bioactive compounds such as alkaloids, tannins, saponins, flavonoids, and phenolics [3]. The total phenolic compound ranges from 751.21 mg/100g GAE db to 1,363 mg/100g GAE db, and the beta carotene content range from 14.75 mg/100g db to 29.50 mg/100g db [2]. Other phytochemicals found in African eggplant include alkaloids (2.05 mg/100g), flavonoids (1.46 mg/100g), saponins (0.81 mg/100g), tannins (1.28 mg/100g), phenol (4.17 mg/100g), cardiac glycosides (0.80 mg/100g), anthocyanins (0.11 mg/100g), and anthraquinone (0.17 mg/100g) [4].

The fruits are also abundant in minerals like potassium, sodium, iron, zinc, copper, manganese and phosphorus, and vitamins like retinol, thiamine, folate, ascorbic acid, riboflavin, and nicotinamide [4]. Additionally, they have been shown to possess some amount of protein and crude fibre [3]. The presence of bioactive compounds in the fruits will contribute to their radical scavenging activity, ranging between 23.12% and 75.61% [3]. Not to mention other health benefits indicated in the literature.

These pieces of evidence suggest that African eggplant can, undoubtedly, serve as a functional ingredient in the production of healthy and nutritious foods. Besides, eggplant has been shown to have great functional properties [5]. Hence, the author suggests that future studies explore and present novel and sustainable ways of utilising African eggplants as functional ingredients within the food industry.

Bibliography

1. "Introduction to functional foods and ingredients". *PIRSA* (2021).
2. Mbondo N., *et al.* "Effect of drying methods on the retention of bioactive compounds in African eggplant." *Food Science and Nutrition* 6.4 (2018): 814-823.
3. Eletta OAA., *et al.* "Evaluation of proximate and antioxidant activities of Ethiopian eggplant (*Solanum aethiopicum* L) and Gboma Eggplant (*Solanum macrocarpon* L)." *Journal of Applied Sciences and Environmental Management* 21.5 (2017): 967-972.

4. Edeke A., *et al.* "Nutritional and Pharmacological Potentials of *Solanum melongena* and *Solanum aethiopicum* Fruits". *The Journal of Phytopharmacology* 10.1 (2021): 61-67.

5. Rodriguez-Jimenez JR., *et al.* "Physicochemical, functional, and nutraceutical properties of eggplant flours obtained by different drying methods". *Molecules* 23.12 (2018): 3210.

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