



## Physico-chemical properties of Safou (*Dacryodes edulis*) fruits grown in Côte d'Ivoire

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### ABSTRACT

**Objectives:** *Dacryodes edulis* is tropical multi-purpose tree, which produces fruits for human consumption. Unfortunately, this fruit grown in Côte d'Ivoire is still unknown to the public and is the subject of very few studies. The present study aims to characterize *D. edulis* fruits starting from their morphological to chemical properties.

**Methodology and Results:** Ripe fruits were collected from 3 sites (CNRA-Azaguié, Azaguié-Blida and Grand-Morié). The morphological characteristics measured (weight, length, diameter and pulp thickness) and identified 2 Ivorian safou varieties: *D. edulis* var. *edulis* and *D. edulis* var. *parvicarpa*. The proximate composition was as follow: moisture (43.02-46.80%), protein (18.66-20.20%), lipid (48.39-52.66%), ash (0.83-1.40%), crude fibre (2.70-3.13%), carbohydrate (14.66-17.82%) and vitamin C (3.06-3.36%). Based on the mineral analysis, the results showed that the most abundant mineral was calcium (531.31-1337.02 mg/kg), followed by potassium (552.39-646.05 mg/kg), zinc (130.48-136.18 mg/kg), sodium (51.54-108.01 mg/kg), magnesium (23.13-73.18 mg/kg), manganese (25.96-26.86 mg/kg) and iron (4.91-8.67 mg/kg). Most of high levels of nutrient content were observed in *D. edulis* var. *edulis*.

**Conclusions and application of findings:** *Dacryodes edulis* fruits are potential source of essential nutrient for Ivorian people and its oil could be used to develop cosmetic products.

**Keywords:** *Dacryodes edulis*, variety, morphological characteristic, proximate composition, mineral composition.