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BIOACTIVE COMPOUNDS OF ASAI PALM FRUIT AND THEIR IMPACT ON HEALTH

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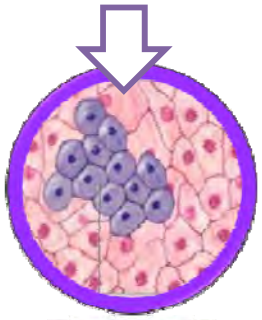
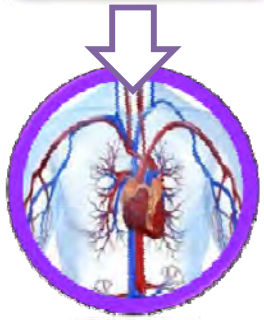
I. Materials and methods

The asai is a plant belonging to the Arecaceae family, Palmae class, and *Euterpe* genus; widely distributed on the plains of the Amazon in countries such as Brazil, Peru, Bolivia, Ecuador, Venezuela and Colombia. Its berry fruits are round- oval in shape with diameters of up to 1.8 cm.

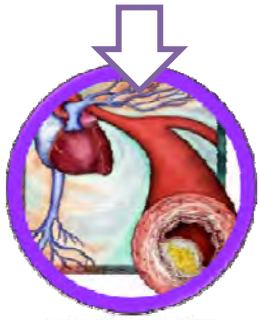
There are two species *oleracea* and *precatoria,* has recently attracted the attention of the scientific community and presents itself as a unique source of bioactive phytochemicals (anthocyanin and fatty acid) that have been shown to have a positive impact on health.



Anticancer effect



Cardioprotective effect



Antiinflammatory effect

II. Materials and methods

Plant material

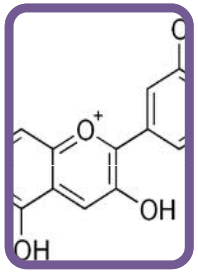
- Asai pulp of the species Euterpe precatoria Mart. from the municipality of San José del Guaviare, Colombia.

Sample preparation

- Lyophilized asai pulp was used.

Bromatological analysis

- The analysis was performed according to AOAC methods.
- The fatty acids analysis was performed according to ISO 5509 and ISO 5508 standardized methods.



Antioxidant analysis

- Total phenol spectrophotometric method developed by Folin-Ciocalteu.
- Antioxidant capacity was determined by the result of two chemical methods, DPPH and ABTS.

III. Results

Table 1. Nutritional composition of the asai pulp (*Euterpe precatoria* Mart.).

Nutrient	g/100g
Moisture	94.20 ±0.02
Ash*	0.46 ±0.02
Fat*	53.03 ±0.33
Protein*	1.62 ±0.30
Crude Fiber*	12.98 ±0.35
Carbohydrates*	31.90 ±0.44

*Calculated with dry basis

Table 2. Fatty acids profile of the asai pulp (*Euterpe precatoria* Mart.).

Fatty acids	Cn*	Average
Myristic	(C14:0)	0.1
Pentadecanoic	(C15:0)	<0.1
Palmitic	(C16:0)	16.7
Palmitoleic	(C16:1)	0.1
Heptadecanoic	(C17:0)	0.1
Stearic	(C18:0)	6.8
Oleic	(C18:1n9c)	70.0
Linoleic	(C18:2n6c)	3.3
Arachidic	(C20:0)	0.4
Linolenic	(C18:3n3)	0.8
Eicosenoic	(C20:1)	0.1
Behenic	(C22:0)	0.1
Lignoceric	(C24:0)	<0.1

*Carbon number

Table 3. Total polyphenols content and antioxidant capacity of the asai pulp (*Euterpe precatoria* Mart).

Chemical parameter	Lyophilized asai pulp
Total Phenols (mg gallic acid/g of dry weight)	104 ± 7
Antioxidant Capacity DPPH (µmoles Trolox/100g dry weight)	7782 ± 427
Antioxidant Capacity ABTS (µmoles Trolox/100g dry weight)	16236 ± 128

IV. Conclusion

The native asai pulp of the Colombian Amazon could be a promising product for functional food due to its antioxidant capacity and bioactive compounds content particularly total polyphenols