

Bioactive compounds and physical-chemical properties of tropical fruit wastes

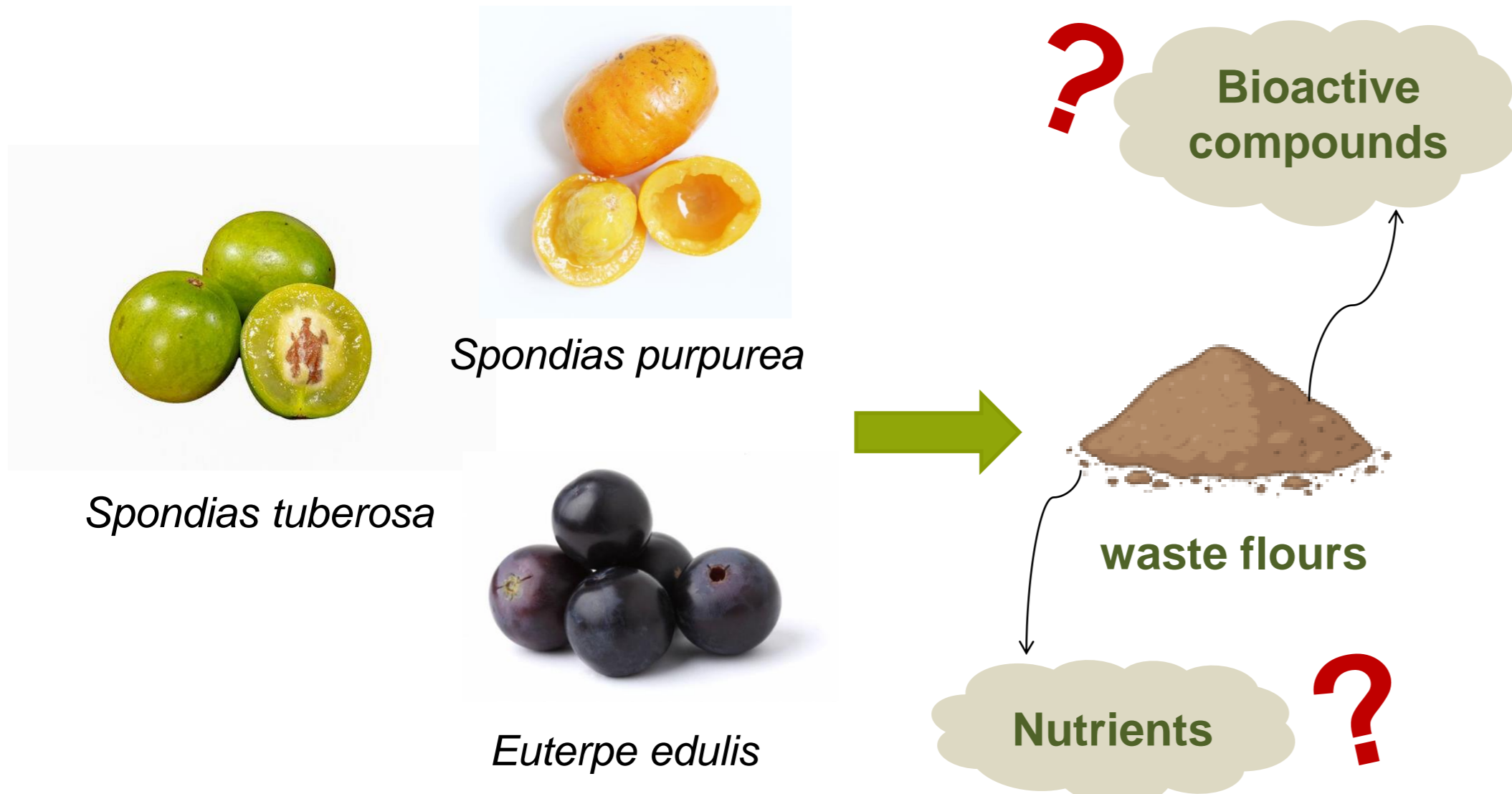
Mariana F. Santos^{1,2}, Beatriz P. Freitas², Jaqueline S. Freitas², Luane S. Lage², Eliane P. Jung², Leilson O. Ribeiro²

¹Federal Institute of Education, Science and Technology of Rio de Janeiro - CNIL

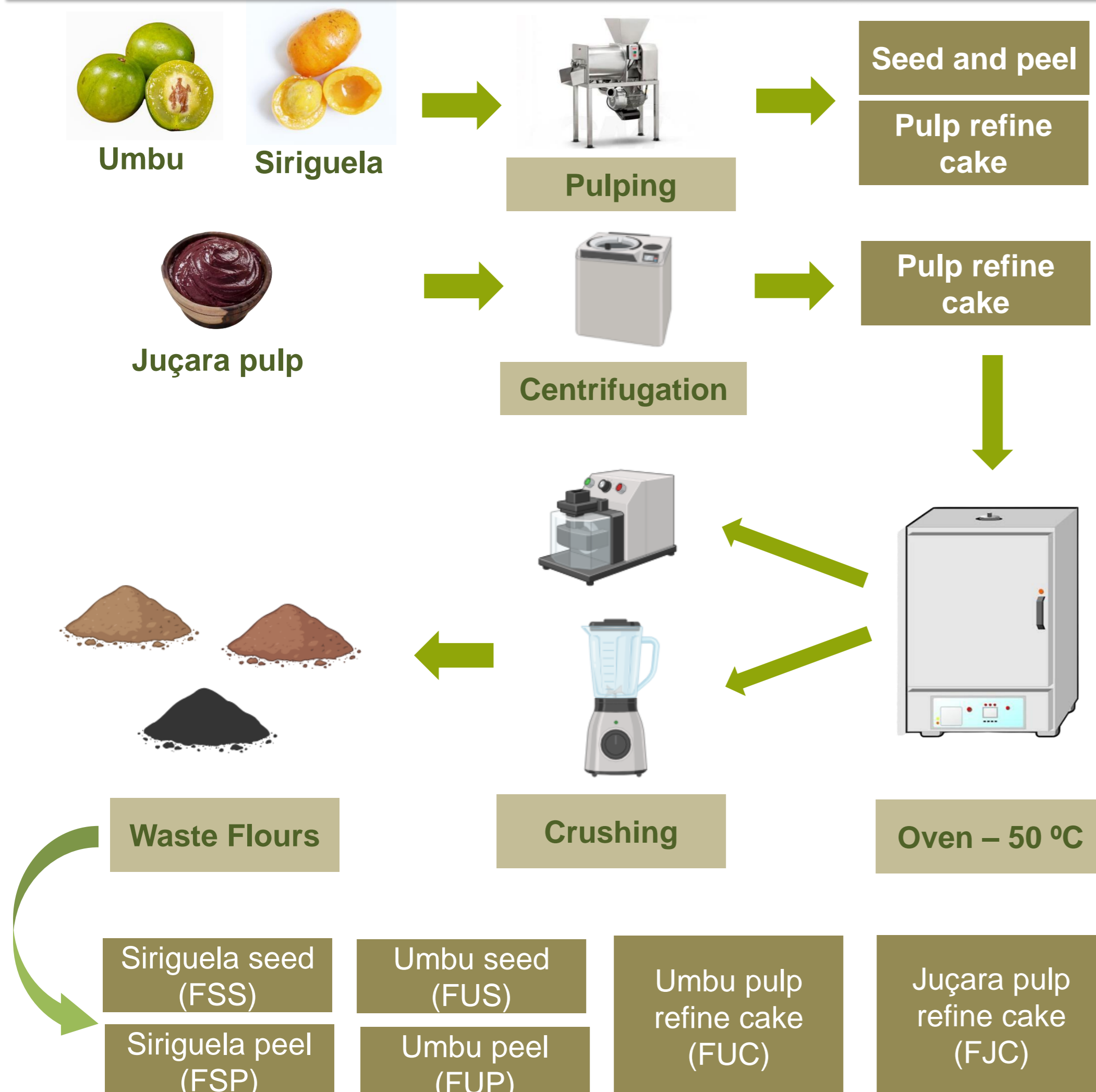
²Instituto Nacional de Tecnologia, Laboratório de Análises Químicas Orgânicas e Inorgânicas

leilson.oliveira@int.gov.br

INTRODUCTION & AIM



METHODS



RESULTS & DISCUSSION

Table 1. Total phenolic content (TPC) and antioxidant capacity of waste flours.

Assays	FSS	FSP	FUS	FUP	FUC	FJC
TPC (mg GAE/100 g)	249	1492	1850	369	1058	774
DPPH [•] (μmol Trolox/g)	10	107	130	20	61	27
ABTS ^{•+} (μmol Trolox/g)	13	13	131	19	63	33
FRAP (μmol Fe ²⁺ /g)	40	312	590	82	350	120

The results were expressed as dry basis

Figure 1. Lipid content in waste flours.

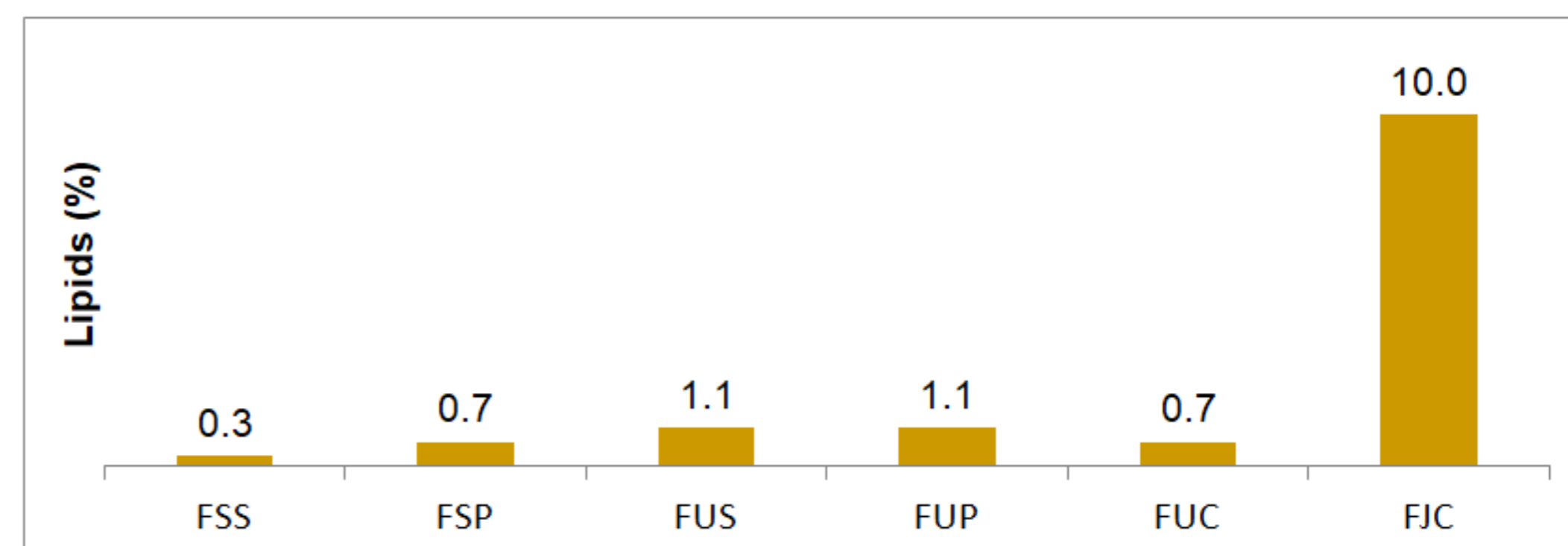


Figure 2. Ashes content in waste flours.

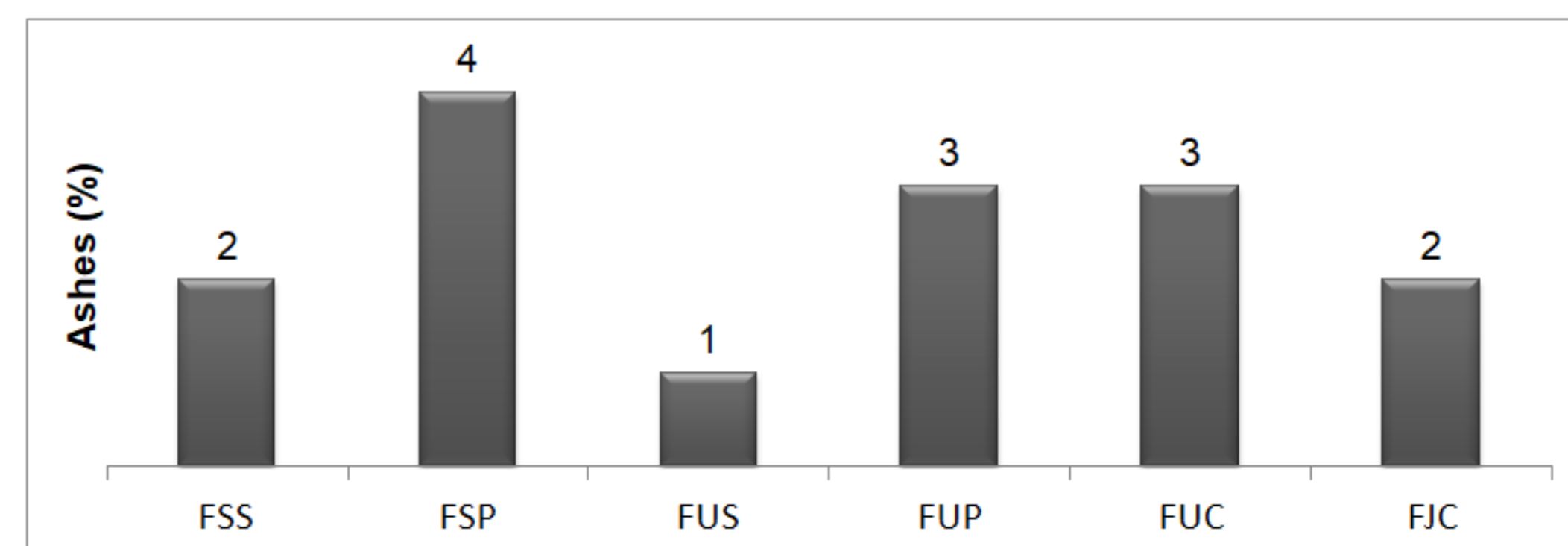


Figure 3. Main minerals found in the samples.

Mineral	FSS↑	FSP↑	All flours
Ca	239.7 mg/100 g	18.3 mg/100 g	0.3 - 13.7 mg/100 g
Mg	18.3 mg/100 g	27.1 mg/100 g	0.3 - 13.7 mg/100 g
Cu	27.1 mg/100 g	1403.9 mg/100 g	0.3 - 13.7 mg/100 g
K	1403.9 mg/100 g	0.3 - 13.7 mg/100 g	0.3 - 13.7 mg/100 g
Mn	0.3 - 13.7 mg/100 g	0.3 - 13.7 mg/100 g	0.3 - 13.7 mg/100 g

CONCLUSION

The flours obtain from processing waste of tropical fruits can be used as a source of bioactive compounds and nutrients in the developing of new foods.

REFERENCES

- BENZIE, I; STRAIN, J. *The Ferric Reducing Ability Of Plasma (FRAP) As A Measure Of "Antioxidant Power": The FRAP Assay*. Analytical Biochemistry. 1996.
- GEORGÉ, S.; BRAT, P.; AMIOT, MJ *Rapid Determination Of Polyphenols And Vitamin C In Plant-derived Products*. J. Agric. Food Chemistry. 2005.
- GIÃO, M; GONZÁLEZ-SANJOSÉ, M; RIVERO-PÉREZ, M; PEREIRA, C; PINTADO, M; MALCATA, F. *Infusions Of Portuguese Medicinal Plants: Dependence Of Final Antioxidant Capacity And Phenol Content On Extraction Characteristics*. J. Sci. Food Agric. 2007.
- HIDALGO, M; SÁNCHEZ-MORENO, C; PASCUAL-TERESA, S. *Flavonoid-flavonoid Interaction And Its Effect On Their Antioxidant Activity*. Food Chemistry. 2010.

