

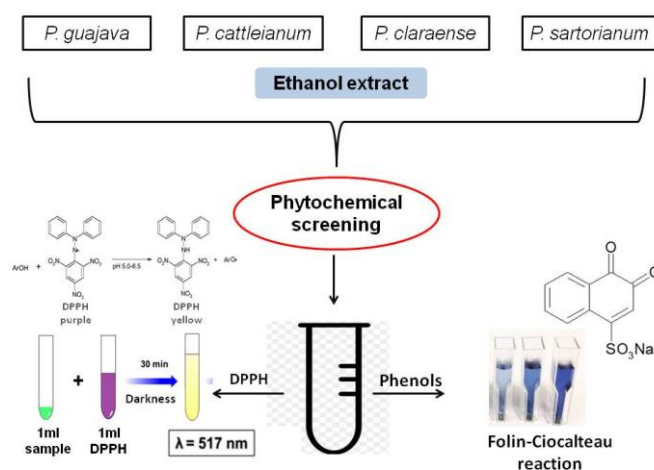
## Comparison of total phenols content and DPPH radical-scavenging activity of four *Psidium* species.

Dailenys Marrero Morfa <sup>1,\*</sup>, Liliana Vicet Muro <sup>1</sup>, Dany Siverio Mota <sup>1</sup>, Julio Pavel Garcia Lahera <sup>2</sup>, Onel Benigno García Espinosa <sup>2</sup>, Maria Elisa Jorge Rodriguez <sup>1</sup>, Susana Castro Torres <sup>1</sup>.

<sup>1</sup> Faculty of Chemistry-Pharmacy, Universidad Central “Marta Abreu” de Las Villas, Santa Clara, 54830, Villa Clara, Cuba. [dmmorfa@uclv.cu](mailto:dmmorfa@uclv.cu), [lill@uclv.edu.cu](mailto:lill@uclv.edu.cu), [danys@uclv.edu.cu](mailto:danys@uclv.edu.cu), [elisa@uclv.cu](mailto:elisa@uclv.cu), [scastro@uclv.cu](mailto:scastro@uclv.cu).

<sup>2</sup> Sancti Spiritus Botanical Garden. Environmental Services Center of Sancti Spíritus, 60200, Sancti Spíritus, Cuba. [jpavelgl@gmail.com](mailto:jpavelgl@gmail.com), [onel@csa.yayabo.inf.cu](mailto:onel@csa.yayabo.inf.cu).

### Graphical Abstract



### Abstract.

A comparative study of the ethanol extract of the leaves of four species of *Psidium* (*P. cattleianum*, *P. claraense*, *P. guajava* and *P. sartorianum*) was carried out. The investigation included phytochemical screening, Folin-Ciocalteu method to determine total phenolic content, and determination of antioxidant activity by assaying the free radical sequestering activity of 2,2-diphenyl-1-picryl-hydrazyl (DPPH). The phytochemical screening showed a similar composition in the four evaluated species. The phenolic content of the ethanolic extracts of the four species was high, especially in the extract of *Psidium sartorianum* (17.59 mgEAG / gES) but lower than that obtained for *Psidium guajava* (19.782 mgEAG / gES) considered a reference species. The ethanolic extracts of the four species of *Psidium* showed values of DPPH free radical scavenger activity higher than the synthetic antioxidant Butyl hydroxytoluene (BHT) (175.98  $\mu\text{g}$  / mL), highlighting the *Psidium sartorianum* (17.82  $\mu\text{g}$  / mL).

### References and Notes

1. Churampi, Ld R.; Montes E. E. Evaluation of the anti-inflammatory activity of the ethanolic extract of the fruit of *Passiflora mollissima* and its use as a biological asset in the cosmetic industry. Faculty of Pharmacy and Biochemistry. Diploma thesis. National University of San Marcos, Peru, **2015**.
2. Ravi, K.; Divyashree, P. *Psidium guajava*: A review on its potential as an adjunct in treating periodontal disease. *Pharmacognosy Review*. **2014**, 8: 96-100.
3. Wazis, C.; Timothy, S. Phytochemical Screening and Analgesic effect of ethanol leaf extract of *Psidium guajava* L. *Journal of Pharmaceutical and Scientific Innovation*. **2015**, 4: 304-7.
4. Miranda, M.; Cúellar, A. *Pharmacognosy and Natural Products*. 2da ed. Editorial Félix Varela, Havana, Cuba, **2012**, 122-30.
5. Arya, V.; Thakur, N. Preliminary Phytochemical Analysis of the Extracts of *Psidium* Leaves. *Journal of Pharmacognosy and Phytochemistry*. **2012**; 1: 1-5.
6. Dwivedi, N.; Patel, G. Physicochemical and Phytochemical studies of *Psidium guajava* L. *Int j Res Ayurveda Pharm*. **2017**; 8
7. Rondón M, Moncayo S, Cornejo X, Santos J and Villalta D. Preliminary phytochemical screening, total phenolic content and antibacterial activity of thirteen native species from Guayas province Ecuador. *Journal of King Saud University-Science*. **2017**: 1-5.