

Ascorbic Acid Content of Some *Malpighia* spp.¹

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INTRODUCTION

Since the reporting of the high ascorbic acid content of the West Indian Cherry by Asenjo and Freire de Gúzman (4)³, and verification by Mustard (40), literature search indicates that *Malpighia puniceifolia* L. (1,2,3,5,6,7,8, 9,10,14,15,16,17,19,20,21,22,24,25,26,27,28,29,32,33,34,35,41,42,44,45) and the closely allied species, *M. glabra* L. (15,16,23,30,31,32,33,38,39,40,45,46, 47) have received much attention.

Of this genus *Malpighia*, which consists of possibly 40 species (11), the vitamin C content of only 2 species, other than those mentioned above, has been reported previously, *i.e.*, *M. coccigera* L., by Mustard (40), from Florida, and *M. souzae* by Miranda (37), from Mexico.

PROCEDURE AND RESULTS

Partly ripe fruit were collected from shrubs of five *Malpighia* species maintained in the collection at the Substation at Isabela, P.R., and the ascorbic acid content was determined by the iodometric method of Ballentine (12). The results were as follows:

1. *M. Shaferi* Britton & Wilson, 507 mg./100 gm. of edible matter.
2. *M. infestissima* (A. Juss.) Rich., 153 mg./100 gm. of edible matter.
3. *M. linearis* Jacq., 139 mg./100 gm. of edible matter.
4. *M. coccigera* L., 103 mg./100 gm. of edible matter.
5. *M. suberosa* Small, 29 mg./100 gm. of edible matter.

DISCUSSION

The five species of *Malpighia* reported on herein are described elsewhere in the literature (13,18,36,43). None of the species tested and presented here approached the previously published ascorbic acid minimums for *M. puniceifolia* L., *M. glabra* L., or *M. souzae*. However, Munsell *et al.* (38,39) reported that *M. glabra* L. from Guatemala yielded 14.9 and 15.5 mg. of ascorbic acid per 100 gm. of edible matter. Carvioto (15), also reported *M. glabra* L. from Mexico as yielding 125.0 mg. of ascorbic acid per 100 gm. of edible matter.

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³ Italic numbers in parentheses refer to Literature Cited, pp. 202-4.

The *M. coccigera* L. fruit tested yielded more ascorbic acid than the same species reported by Mustard (40) from Florida, which yielded 64 to 74 mg. of ascorbic acid per 100 gm. of edible matter.

CONCLUSION

Of a genus consisting of possibly 40 species, and of which only 8 have been reported upon, *M. puniceifolia* L., *M. glabra* L., and *M. souzae* still yield the most natural ascorbic acid.

SUMMARY

Malpighia Shaferi Britton & Wilson, *M. infestissima* (A. Juss.) Rich., *M. linearis* Jacq., *M. coccigera* L., and *M. suberosa* Small are reported to contain 507, 153, 139, 103, and 29 mg. of ascorbic acid per 100 gm. of edible matter, respectively.

RESUMEN

De acuerdo con los datos a mano, *Malpighia Shaferi* Britton & Wilson, *M. infestissima* (A. Juss.) Rich., *M. linearis* Jacq., *M. coccigera* L., and *M. suberosa* Small, contienen 507, 153, 139, 103, y 29 mg. de ácido ascórbico por cada 100 gms. de material comestible, respectivamente.

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