Honey produced by stingless bee species (*Tetragonisca angustula*) has been characterized according to traditional physicochemical standards (color and moisture), biochemical components (flavonoids, polyphenols, nitrites, proteins), and bioactive properties (antibacterial activity, antioxidant capacity). Analytical data are also provided for a sample of *Apis mellifera* and an artificial honey control. For stingless bees, honey color varied between 26 and 150 mm Pfund. *M. illota* produced the lightest honey, while *N. melanocera* and *T. angustula* were the darkest. Moisture varied between 20.8 and 45.8 g water/100 g, confirming higher moisture for stingless bee honey than the *A. mellifera*honey standard of 20 g water/100 g. Flavonoids varied from 2.6 to 31.0 mg quercetin equivalents/100g, nitrites from 0.30 to 2.88 μmoles nitrites/100 g, polyphenols from 99.7 to 464.9 mg gallic acid equivalents/100g, proteins from 0.75 to 2.86 g/100 g, and the antioxidant capacity from 93.8 to 569.6 μmoles Trolox equivalents/100 g. The minimal inhibitory concentration (MIC) was slightly lower against *Staphylococcus aureus* (12.5 -50 g/100 mL) than *Escherichia coli* (50 g/100 mL).

Biochemical components of honey.

**Bee Biochemical components**

**species1** Flavonoids Nitrites Polyphenols Proteins

**Mariola Honey** 5.0 ± 2.9 0.37 ± 0.05 78.3 ± 52.6 1 .48 ± 0.03

**Bee Honey** 1.6 ± 2.7 0.00 ± 0.00 23.6 ± 4.2 0.27 ± 0.02

This is the first work where the nitrite content of stingless bee honey has been reported. The nitrite content was examined because this is a metabolite of nitric oxide. Nitric oxide and/or nitrite might be responsible, in part, for the biological and therapeutic effects of honey [11]. In this research, we could establish that all the stingless bee honey samples had nitrite, along with antioxidant compounds such as polyphenols and flavonoids.

Nitrite reduces lipid peroxidation in simulated gastric fluid. Interestingly was demonstrated that, in healthy individuals, honey solutions increased total urinary nitrite content whilst artificial honey decreased it.