



**II International
Symposium on** **BEE**
PRODUCTS
Annual Meeting of IHC

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Book of Abstracts



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PC1. Honey as a potentiator in the bioactivity of lemon flavoured black tea.

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Honey plays an important role in human health by combating damage caused by oxidizing agents, namely reducing the risk of heart disease, cancer, immune-system decline, cataracts, and inflammatory processes, among others. The antioxidant activity of honey has been extensively reported and attributed to the antioxidants present that include both enzymatic and non-enzymatic substances (Ferreira et al., 2009). The same properties have been attributed to black tea (*Camellia sinensis*) and lemon (*Citrus limon*), which contain powerful antioxidant compounds such as flavonoids and vitamin C, respectively (Milasiene et al., 2007; Guimarães et al., 2010). Although it has already been demonstrated that black tea, lemon and honey have antioxidant activity, nothing is reported about the effects of their concomitant use. In the present study, those effects were evaluated in infusions of lemon flavoured black tea with three different kinds of honey (light amber, amber and dark amber) from *Lavandula stoechas*, *Erica* sp. pl. and other indigenous floral species from Northeast Portugal, a region with high amounts of this food product. The antioxidant properties were measured by different in vitro chemical and biochemical assays: scavenging effects on DPPH (2,2-diphenyl-1-picrylhydrazyl) radicals, reducing power, inhibition of β -carotene bleaching and inhibition of lipid peroxidation in brain cell homogenates by TBARS (thiobarbituric acid reactive substances) assay. Antioxidant compounds such as ascorbic acid, total phenolics and flavonoids were also quantified. Data obtained showed that the use of honey (dark amber>amber>light amber) potentiates the antioxidant activity of lemon flavoured black tea, which is already a mixture of two powerful antioxidant matrixes (lemon and tea), increasing reducing power and lipid peroxidation inhibition properties, but also the antioxidants content such as phenolics, flavonoids and ascorbic acid. Moreover, the mixture of honey and black tea is much more favourable in the antioxidants point of view than the use of honey alone.

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