The World Health Organization estimates that 80% of the world’s population uses medicinal plants in primary health needs. *Pterospartum tridentatum* (L.) Willk. (Fabaceae) and *Cymbopogon citratus* (DC) Stapf. (Poaceae) are examples of such medicinal plants. *P. tridentatum* is a small shrub, which can be found in the western part of the Iberian Peninsula and northern Morocco. Traditionally its flowers can be used to treat pneumonia, colds, bronchitis and hepatic disease [1]. *C. citratus*, commonly known as lemon grass, is a tall, aromatic, perennial densely tufted grass from Southeast Asia. There are many effects that can be attributed to this species, such as diuretics effects; it can also be used in hepatic disorders and to treat depression, flatulence and intestinal cramps [2]. The mixture of these two species opens a new panoply of therapeutic effects that can range from the treatment in case of stomach pain, cramping and flatulence, diarrhea, vomiting and flu. This is due to the interaction of these two species. In this study we aimed to evaluate the antioxidant activity of the single plants and of the mixture of the same plants (infusions and methanolic extracts). The antioxidant activity was accessed by four *in vitro* 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. In general, infusions revealed higher antioxidant activity than methanolic extracts, being higher for *P. tridentatum*. With the exception of the β-carotene bleaching inhibition assay, the mixture of the two plants revealed significant synergistic effects, allowing higher antioxidant activity. Although the interesting results obtained, the authors recommend a safe consume of these plant materials, including restricting the dose and duration of use to minimize the risks of potentially interactions with conventional medicines. Further studies will be conducted in order to identify the compounds responsible for the synergisms observed.

Keywords: Antioxidant activity; *Cymbopogon citratus*; *Pterospartum tridentatum*; Synergistic effects;

Acknowledgements
FCT (Portugal) for financial support to the research center CIMO (PEst-OE/AGR/UI0690/2011) and L. Barros (Compromisso para a Ciência 2008). Ervital-plantas Aromáticas e Medicinais Lda. for providing the samples for analysis.

References