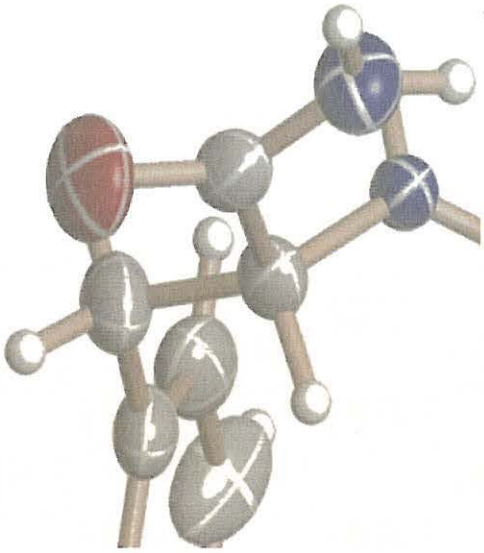

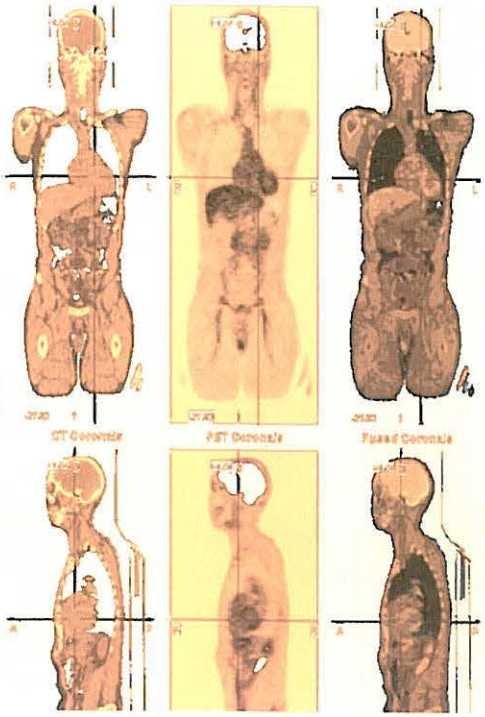

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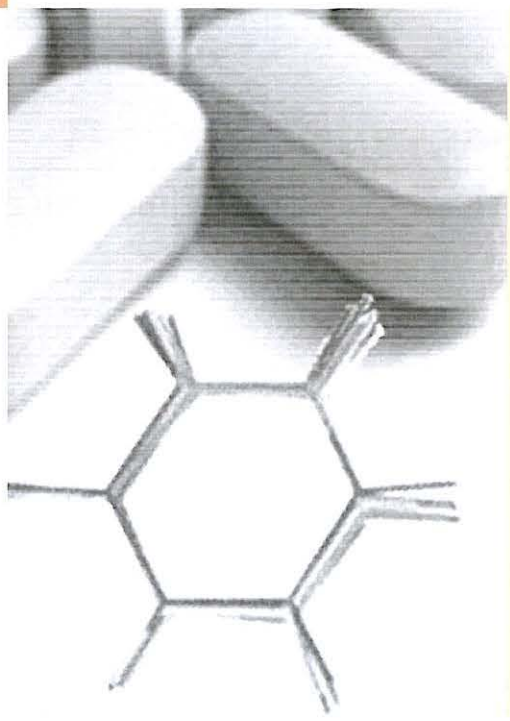

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A comparative study between antioxidant properties of *Ginkgo biloba* L. infusion and dietary supplements

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The medical interest in western *Ginkgo biloba*L. has increased since the 1980s, due to its potent action on the cerebral vascular activity and, in particular, for Alzheimer´sdisease. A variety of mechanisms of neuronal degeneration in Alzheimer´s disease has been proposed, which includes formation of free radicals and oxidative stress [1,2]. Regarding the described correlation between antioxidants and Alzheimer's disease, and considering the use of *G. biloga* in the mentioned pathology, in the present study, the antioxidant activity of different dietary supplements (pills based on *G. biloba* leaves standardized extract with 24% glycosides and 6% terpenes- P1, P2 and P3) was evaluated and compared to the leaves infusion (LI).The samples from dietary supplements were prepared as indicated in the label by dissolving each pill in distilled water; P1, P2 and P3 correspond to pills with 40, 60 and 100 mg of *G. biloba* standardized extract, respectively).Several dilutions of all the prepared solutions were used in the antioxidant activity assays, which include evaluation of free radicals scavenging activity, reducing power and lipid peroxidation inhibition. Contents in phenolics and flavonoids were also obtained by colorimetric assays.In general,P2 and P3 samples revealed the highest antioxidant activity; P2 showed higher free radicals scavenging activity (EC_{50}=70 μg/mL) and reducing power (EC_{50}=60 μg/mL), while P3 gave higher lipid peroxidation inhibition in a β-carotene-linoleate model system (EC_{50}=220 μg/mL) and in brain homogenates (EC_{50}=20 μg/mL).The mentioned samples also gave the highest amount of phenolics and flavonoids. Overall, dietary supplements based on standardized extracts of *G. biloba* leaves provide higher antioxidant properties than leaves infusion. Furthermore, the increase of the mass extract in the pills also contributed to increase the antioxidant potential, since P1 (with the lowest amount of extract- 40 mg) presented the lowest properties. This study showed that bioactive compounds present in the dietary supplements are different than the ones present in leaves infusion, and should be determined.

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