Association of *Ginkgo biloba* L extract in nanocapsules

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**Key words:** Flavonoids; Ginkgo biloba L; nanocapsules.

**Introduction:** *Ginkgo biloba* L. extract has flavonoids which act as antioxidants, however, most of the vegetable extracts show low stability. Nanocapsules (NC) are an alternative to the distribution of active substances in the organism because they propitiate a reduction in the adverse effects and protection against oxidation. The purpose of this study is to associate the *Ginkgo biloba* L extract in NC aiming slow release and protection of the flavonoids.

**Experimental Part:** Acetone *Ginkgo biloba* L extract 1:10 (AGBE) was prepared in soxhlet. To total flavonoids quantification (TF), 10g of the extract were weighed and diluted in 100mL of acetone. Four fractions of 10mL each were taken and diluted to 25mL. Three fraction were complexed with AlCl₃ 2% and the fourth was considered the blank. After 30 minutes the samples were read in UV spectrophotometer at 396nm. Relative density, pH, dry residue and thin layer chromatography (TLC) (mobile phase: anhydrous formic acid, glacial acetic acid, ethyl acetate, water 67,6:17,4:7,5:7,5; standards rutin, quercetin, luteolin, vitexin and chlorogenic acid) were performed to AGBE. The NC were prepared by nanoprecipitation at the concentrations of 35,8mg/mL e 5,37 mg/mL of TF and they were characterized by pH determination, particle size and TF content. NC was also prepared without extract.

**Results/Discussion:** AGBE shown 0,3546 %±0,0175 of dry residue, 0,882 g/mL±0,010 of relative density, pH of 4,41±0,040 and the TF content was 3,43 %±0,160. The TLC detected rutin and quercetin Rf 0,43 e 0,57. The NC with 35,8 mg/mL of TF pH(3,83±0,040) was lower than the NC with 5,37mg/mL of TF pH (4,54±0,043). The NC com 5,37 mg/mL of TF particle size was 273,1±11,25 nm and the polydispersity (PD) was 0,45±0,06. The NC containing 35,8 mg/mL of TF showed a double population. The NC without extract showed 279,4±4,97nm of particle diameter and 0,23±0,004 of PD. The TF content of both NC was about 100%.

**Conclusion:** The *Ginkgo biloba* L acetone extract association in NC were feasible in lower concentrations of TF.

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