INTRODUCTION
Many plant species belonging to the genus *Lippia* and in particular their fragrant essential oils present economic potential in the industry. Moreover, polyphenols and flavonoids are natural components of plants. Antioxidant activity and antialergic, antiviral, vasodilator, antimicrobial and anti-inflammatory properties are attributed to these compounds.
The aim of the present study was the evaluation of polyphenolic composition and the antioxidant activity of fluid extract of *Lippia alba* (Mill.).

MATERIALS AND METHODS
The fluid extract was prepared from percolation of dried leaves powder (particles of 250 - 710 µm) with ethanol 70°. It was carried out its phytochemical screening through secondary metabolites identification reactions and a thin layer chromatography for flavonoids exploration.
The total polyphenolic content was performed according to Singleton et al method, with Folin-Ciocalteu reagent, using a Beckman DU 640B spectrophotometer. Total flavonoids content was determined by Lock et al technique. In vitro antioxidant activity was tested in accordance with the Brand-Williams' modified method through the free radical scavenging activity upon DPPH reagent. $IC_{50}$ was calculated by plotting the DPPH remnant percentage at the steady state (10 min) against various concentrations of phenols in extract (7.1 a 35.5 µg). An autographical test in TLC was carried out for checking biological activity in situ (with DPPH reagent) using two running systems and revealed with ammonia vapor and UV-Vis.
All the precedent measurements were for triplicate and expressed as average (n=3) and standard deviation.

RESULTS
The secondary metabolites found were phenols/tannins, flavonoids and terpenes. The total phenols content test revealed a value of 70.8 ± 0.104 mg of AG equivalent /mL ($R^2 = 0.9946$ from the calibration curve), in the meantime total flavonoids content showed a value of 6.92 ± 0.203 mg of quercetin equivalent/mL ($R^2 = 0.9988$). The registered values of antioxidant activity were 2.18 ± 0.005 mg of gallic acid equivalent /mL and 0.59 ± 0.009 mg of quercetin equivalent /mL.
The autographical test revealed two components with more intense antioxidant activity and two with low activity, all of them with solvent system of medium polarity.

CONCLUSIONS
The extract’s phenolic and flavonoid composition would probably justify its antioxidant activity. The total phenolic content was different from the reported in another papers in relation to *Lippia alba* (1,2). The differences in the chemical composition could be due to geographical, climatic and/or extraction method’s factors. The radical scavenging activity of extract could be related to the nature of phenolics compound. The flavonoids detected would be of medium polarity.

REFERENCES
Córdoba, Argentina, 24 y 25 de junio de 2010

* Corresponding author. Tel +54 3732 420137, fax +54 3732 420137 Int. 106; e-mail: mbnunez@uncas.edu.ar