

## Phytochemical and antibacterial studies on the aqueous extract of *Eucalyptus gomphocephala* DC

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**ABSTRACT:**

This work aims to find out the molecule responsible for the good activity against the strains of *Pseudomonas aeruginosa* reflected in a pre work done on the phytochemical study of aqueous extract of *Eucalyptus gomphocephala*. We have initially processed the quantitative colorimetric determination by a UV-Vis spectrophotometer for total polyphenols and flavonoids and a qualitative analysis by high performance liquid chromatography (HPLC) coupled with mass spectroscopy. Quantitative determinations of total polyphenols by the Folin-Ciocalteu reagent and flavonoids by AlCl<sub>3</sub> method revealed the richness of this extract in total polyphenols. Qualitative analysis by HPLC / ESI-MS revealed the presence of gallic acid. This molecule was tested by the agar diffusion method and the macrodilution method in liquid medium, which showed greater activity than the aqueous extract. The results obtained in this study suggest that the gallic acid may be used in the treatment of infections caused by *Pseudomonas aeruginosa*.

**Keywords:**

*Eucalyptus gomphocephala*, Quantitative analysis, Qualitative analysis, Aqueous extract, Gallic acid, *Pseudomonas aeruginosa*.