



ANTIOXIDANT AND ANTIMICROBIAL ACTIVITY OF THE ETHANOLIC EXTRACT OF THE AERIAL PARTS OF *Solanum radicans* L. f. "Huallpachaqui"

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INTRODUCTION

Medicinal plants are used in our country as an alternative for the treatment of some diseases, in order to assess their use the present work was developed; the objective was to evaluate the antioxidant and antimicrobial activity of the species *Solanum radicans* L. f. From the Department of Apurímac; the same one that is used as digestive, antidiarrheal and anti-infective.

MATERIAL AND METHODS

The vegetal sample was collected in San Juan de Chacña, Province of Aymaraes, Department of Apurímac, selected and dried under shade, fragmented, put to macerate in ethanol for 21 days, filtered and concentrated in a rotary evaporator, the phytochemical march and identification was carried out of secondary metabolites by staining and / or precipitation reactions [1]. Physicochemical tests were carried out for the characterization of the extract. The antioxidant activity was determined by the method of inhibition against the free radical 2,2-diphenyl-1-picrylhydraz (DPPH) and by the antioxidant power of iron reduction (FRAP) method [2]; the antimicrobial activity was carried out by the method of diffusion by agar excavation [3].

RESULTS

The following secondary metabolites were identified: free phenolic groups, amino acids, flavonoids, triterpenes and / or steroids, alkaloids and catechins.

The extract consists of the following

physicochemical parameters: viscous liquid appearance; dark green color; pH of 4,35; ashes in g / 100g is of 14, 16; Solids soluble in ° Brix of 5,2; Total solids g / 100g equal to 99,18.

When testing for antioxidant methods, it was found that the antioxidant activity by DPPH IC50 is 2,77 mg and for the FRAP-TEAC method is 6,59 mg / mL. The results of the antibacterial activity show that the 50% ethanolic extract shows antibacterial activity in 68% against *Staphylococcus aureus* and on *Pseudomona aeruginosa* in 60% against the positive control ciprofloxacin 5ug / mL.

CONCLUSIONS

- 1) The ethanolic extract of *Solanum radicans* L. f. presented antioxidant activity by the DPPH and FRAP methods.
- 2) The antioxidant activity is related to the secondary metabolites found.
- 3) The 50% ethanolic extract shows antibacterial activity against *S. aureus* and *P. aeruginosa*.

REFERENCES

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