

PHYTOCHEMICAL SCREENING AND DETERMINATION OF TOTAL PHENOLIC COMPOUNDS, TANNINS AND FLAVONOIDS OF THE ETHANOL EXTRACT FROM THE STEMS OF *Smilax* sp.

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Introduction

- *Smilax* sp. is a plant native to the Brazilian Cerrado;
- Popularly known as sarsaparilla or japecanga;
- Used to treat skin, sexual and inflammatory diseases;
- In the literature that demonstrate antioxidant, allelopathic, larvicidal and antimicrobial action;
- This study aimed to identify the main classes of compounds from a phytochemical screening and to determine total phenolic compounds, tannins and flavonoids content in the ethanol extract obtained from the stems of *Smilax* sp.

Methodology

Extract ethanolic

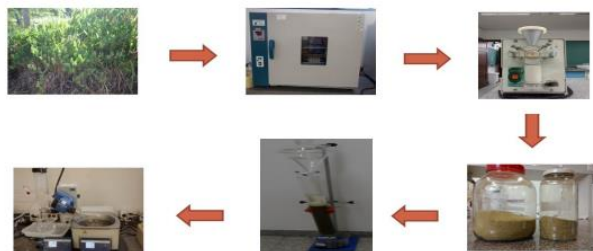


Figure 1: Obtaining the extract.

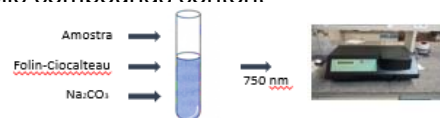
Phytochemical screening

Table 1: Phytochemical screening

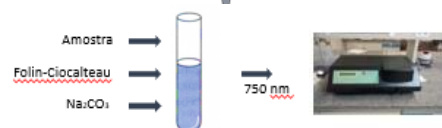
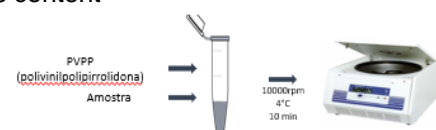
Secondary metabolites	Test	Confirmation
Alkaloids	Dragendorff reagentes	Precipitate formation
Antraquinonas	NaOH 1%	Pink or reddish coloring
Coumarins	NaOH 1%	Yellow coloring
Steroids/ Terpenoides	H ₂ SO ₄ + acetic anhydride	Green/blue or red/purple colour
Flavonoids	H ₂ SO ₄	Reddish coloring
Saponins	Distilled water + agitation	Foaming
Tannins	FeCl ₃	Green or blue colour

Determination total phenolic compounds, tannins and flavonoids content

- Phenolic compounds content



- Tannins content



- Flavonoids content

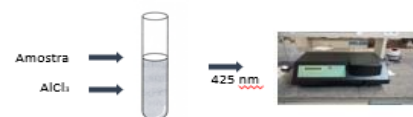


Figure 2: Determination of total content

Results and discussion

Demonstrated flavonoids, saponins, tannins, alkaloids, coumarins and steroids.

Table 2: Determination of total content

Extract ethanolic	
Phenolic compound content (µg/mg)	112,99 ± 5,81
Tannin content (µg/mg)	52,39 ± 7,22
Flavonoid content (µg/mg)	18,67 ± 0,63

Conclusions

Alkaloids, coumarins, steroids, triterpenoids, flavonoids, saponins and condensed tannins and high values of total contents of phenolic compounds, tannins and flavonoids were detected;

Acknowledgment: