

## **J - 72 - Evaluation of Antimicrobial Activity of Aqueous Extract from Leaves and Fruits to *Physalis pubescens***

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**INTRODUCTION:** The *Physalis* genus belongs to Solanaceae family, perennial habits and distributed in temperate areas. The plants of genus are traditionally used as antipyretic, diuretic, antitumor, anti-inflammatory, antiparasitic, antiviral, antimicrobial and immunomodulatory. **OBJECTIVES:** Evaluate the antimicrobial activity of aqueous extract of leaves and fruits of *Physalis pubescens* front of strains *Acinetobacter baumannii*, *Enterococcus faecalis*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus*. **MATERIALS AND METHODS:** The aqueous extracts were prepared from the dried leaves and fresh fruits of *P. pubescens* in concentration 10%, after seven days were filtered and freeze-dried for 48 hours. The lyophilized powder was resuspended in water in concentrations 400, 200, 150, 100, 50, 25 mg/mL. Bacteria were seeded into nutrient agar for 24 hours at 35°C, then resuspended in 0.9% saline solution. An aliquot of 100 µL of this suspension was transferred to petri dish with Mueller Hinton agar. The filter paper disks were saturated with 10 µL extract at each concentration. **DISCUSSION AND RESULTS:** *P. aeruginosa* proved to be resistant at all concentrations tested in extract of leaves and fruit. *A. baumannii*, *S. aureus* and *E. faecalis* were resistant in leaves extracts, whereas *E. coli* demonstrated sensitivity (200, 150 and 25 mg / mL). For extract of fruits *E. coli* and *E. faecalis* were resistant, while *S. aureus* (400, 150 and 100 mg / mL) and *A. baumannii* (400, 100, 50 and 25 mg / mL) demonstrated sensitivity. It should be accentuate that the average of the halos obtained in lyophilized extracts where lower than the average of the inhibition halos of the controls. **CONCLUSION:** The results confirm the medicinal use with antimicrobial finality. However, this activity varies among micro-organisms, demonstrating that the extract may act differently, according to the components of the plant part used and concentration, in the bacteria resistance mechanisms.

**Keywords:** *Physalis pubescens*, antimicrobial activity, resistance mechanisms

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