CHARACTERIZATION OF LECTIN ACTIVITY IN PROTEIN EXTRACTS FROM TISSUES OF *Chenopodium ambrosioides* OBTAINED BY DIFFERENT EXTRACTION CONDITIONS

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INTRODUCTION: Plant lectins are excellent tools for research since they have numerous biological activities, such as antioxidant, anti-inflammatory and microbicidal. Because the importance of lectins, optimizing the purification protocols is crucial for efficient obtaining in terms of yield and maintenance of biological activity. For this purpose, various solutions and buffer systems can be evaluated to optimize extraction processes for subsequent lectin purification and characterization. **OBJECTIVE:** This study aimed to detect the presence of lectin activity in extracts from tissues of the medicinal species *Chenopodium ambrosioides*, obtained with different extraction systems. **MATERIALS AND METHODS:** *C. ambrosioides* was collected, dried at room temperature, leaf and stem were separated, powdered and submitted to extraction in distinct solutions: 0.15 M NaCl, phosphate-citrate buffer (pH 6), sodium phosphate buffer (pH 7.5) and Tris-HCl buffer (pH 10.5). After agitation overnight, materials were centrifuged (4 °C) and crude extracts (CE) obtained were submitted to protein quantification and hemagglutinating activity assays (HA) using glutaraldehyde-treated human and rabbit erythrocytes. **RESULTS AND DISCUSSION:** Obtained CE showed protein content (CE of leaf in NaCl: 3.8 mg/mL; CE of stem in NaCl: 2.3 mg/mL; CE of leaf in phosphate-citrate: 6.1 mg/mL; CE of leaf in sodium phosphate: 5.7 mg/mL; CE of leaf in Tris-HCl: 6.5 mg/mL) revealing that leaves and stems from *C. ambrosioides* are sources of extractable proteins in different solutions and pH values. Only CE obtained of leaf in 0.15 M NaCl presented titer of HA (8⁻¹, human erythrocytes), indicating the potential presence of lectin in leaves from *C. ambrosioides*. **CONCLUSION:** All solutions evaluated in this study were effective to extract leaf and stem proteins of *C. ambrosioides*; among different solutions, only 0.15 M NaCl was effective for obtaining protein extract from leaves with lectin activity, revealing that leaf of *C. ambrosioides* is a potential source for lectin purification.

**Keywords:** leaf protein, leaf lectin, *Chenopodium ambrosioides*.

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