

## THE STUDY OF *MATRICARIA RECUTITA* L.(ISFAHAN GENOTYPE) LEAF PIGMENTS UNDER DIFFERENT LEVELS OF SALINITY

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### Introduction

The scientific name of chamomile *Matricaria recutita* L., Asteraceae family, is a halophyte plant. Important and one of the oldest medicinal plants is in the world. Salinity of the soil or water stress in arid and semi-arid main and can severely limit plant growth and yield. Salinity, agriculture is one of the factors that make it difficult for most plants, and is a variety of quantitative and qualitative aspects of plant growth and affect. This study was conducted to evaluate the extent of chemical compounds such as carotenoids, anthocyanins and chlorophyll (a, b and total) leaves the *Matricaria recutita* were conducted under different levels of salinity.

### Materials and Methods

In this experiment, the Isfahan genotype were cultivated in complete randomized block design with three replications and three levels of salinity (control, 6 and 12 ds/ m ) in Isfahan agriculture research center farm. Plants after full deployment using a combination of salt (NaCl) and municipal water were irrigated. The leaves were collected at the time of the last harvest flowers and chlorophyll and carotenoid levels using the Arnon (1949 ), anthocyanin content of Wagner (1979 ) were measured. This study examines the amount of chlorophyll pigments, anthocyanins and carotenoids were studied under salt stress. Data obtained with the use of SAS software , and analysis of variance with Duncan's test at 5% probability level were analyzed.

### Results and Discussion

Analysis of variance showed that all traits were significant at the 5% level. Based on the experimental results, the highest anthocyanin 6 ds/m and the lowest 12 ds/m was observed. Carotenoid levels in control and 12 ds/m greater than 6 ds/m respectively. The highest chlorophyll (a, b and total) in control and 12 ds/m and lowest in 6 ds/m was observed. The results can be stated that chamomile is able to adapt to salt water areas and can adjust the amount of chemicals in their survival. Recommended higher salinity levels for this plant are examined to determine the salinity tolerance threshold .

**Keywords:** *M.recutita*, Salt stress, Carotenoids, Anthocyanins, Chlorophyll (a, b and total).

### References

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