

# Genetic Diversity in Barberry Genotypes from Northwest of Iran as Revealed by Biochemical Characteristics and ISSR Markers

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In the present study Genetic Diversity in Barberry Genotypes from Northwest of Iran as Revealed by biochemical characteristics and Inter-simple sequence repeat (ISSR) markers. Molecular diversity by ISSR markers was investigated in 26 individuals of Barberry genotypes from Northwest of Iran. Also, pH, total soluble solids (TSS), total acidity (TA) and total carotenoid (TCC) of genotypes were determined. This study showed that various species of barberry fruits have different amounts of TSS, pH, TA and TCC. The pH of barberry genotypes varied within 2,71 for G1 (*B. carataegina*) to 3,71 for G2 (*B. vulgaris*). According to the results, the highest and lowest TSS content was observed in G1 (*B. vulgaris*) and G17 (*B. integerima*) genotypes (18,51 and 1,11) respectively. In the Total acidity, the highest (13,11) and lowest (3,11) total acidity were observed in G1 (*B. carataegina*) and G11 (*B. integerima*) genotypes, respectively. Also the highest and lowest TCC content was observed in G2 (38,37 mg/g FW) from (*B. vulgaris*) genus and G17 (4,44 mg/g FW) from (*B. integerima*) genus respectively. Inter-simple sequence repeat (ISSR) techniques produced 58 polymorphic bands. Result showed that the genetic similarity between barberry genotypes was 0,47 to 1,00 and the populations were divided into four groups.

**Keywords:** Barberry, Genetic Diversity, ISSR Markers, Biochemical

## References

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