

## Abstract

**Introduction:** Dog rose or wild rose with the scientific name *Rosa canina* belongs to the *Rosaceae* family. This plant has many therapeutic properties such as anti-oxidant, anti-tumor and anti-inflammatory properties, which are due to plant vitamins, minerals (potassium and phosphorus), vitamins (vitamin C), carotenoids and flavoring compounds found in the fruit. The *Rosa canina* plant contains vitamin C (ascorbic acid), an essential water-soluble vitamin that plays an essential role in the formation of collagen, which is a major component of many connective tissues in the body. Therefore, the aim of this study is to determine the amount of phenols, flavonoids and vitamin C in the *Rosa canina* fruit prepared from the Ardabil.

**Methods:** *Rosa canina* plant was collected in the spring of 2021 from around the Hiran tunnel in Ardabil city. In the next step, after complete washing, the fleshy part of the *Rosa canina* fruit was separated from the kernels. Extraction was done by soaking method. Then, a freeze dryer was used in order to dehydrate and completely remove the moisture present in the fruit of the *Rosa canina*. Then the amount of total phenols and total flavonoid were determined by ELISA reder. Finally, the amount of vitamin C in the extract was determined by HPLC.

**Results:** The results of the investigation of the phytochemical characteristics of the *Rosa canina* fruit showed that the amount of total phenol and flavonoid content were  $101/5 \pm 2/1$  and  $48/7 \pm 0/68$  mg GAE/g DW of dry extract, respectively. In addition, the results obtained from HPLC showed that the amount of vitamin C in the *Rosa canina* is  $4/91 \pm 0/61$  mg/g of dry matter.

**Conclusion:** The present study shows that the fruit *Rosa canina* of the found in Ardabil city contains a suitable level of phenols and flavonoids. In addition, the amount of vitamin C in this fruit is at a high level compared to the studies conducted in Lorestan province. Therefore, this fruit can be introduced as a rich source of vitamin C.

**Keywords:** *Rosa canina*, vitamin C, total phenol, total flavonoid