



## **Vinegar processed Zireh: Evaluation of Chemical Changes Before and After Processing of Zireh Kermani**

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### **Abstract:**

**Introduction:** Zireh Kermani, with the scientific name of *Bunium persicum* (Boiss.) B. fedtsch, is a plant belonging to Umbelliferae family. In some Iranian traditional medicine references, the fruits of Zireh are introduced as processed with vinegar and heat. Thus, the study examines qualitative and quantitative effects of this process on the plant compounds.

**Methods:** *Bunium persicum* fruit was prepared from a standard source and then processed according to the method noted in Iranian traditional medicine references. Thin layer chromatography was used for determination of flavonoid and coumarin compounds of the plant. Additionally, polyphenolic compounds were measured by Folin-Ciocalteau method, before and after processing of the plant.

**Findings:** Thin layer chromatography indicated that a certain amount of flavonoid and coumarin compounds entered vinegar. Presence of kaempferol and caffeic acid was observed in all samples of TLC analysis. Also, polyphenolic compounds increased in later stages of the process.

**Discussion and conclusion:** As by the process, a certain amount of flavonoid and coumarin compounds entered vinegar or changed by thermal effects and also polyphenolic compounds increase, the aims of this process can be decreasing the side-effects of the medicine and increase the particular effects.

**Keywords:** Iranian traditional medicine, Zireh Kermani, Vinegar, Flavonoid, Coumarin.

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