



## Analysis and evaluation of compounds from *Cichorium intybus* aromatic water trade market samples

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**Background and objectives:** *Cichorium intybus* products are one of the best sellers in market Because of their effect on treatment of infection, poisoning, diabetes and allergy. This is the first study about *Cichorium intybus* market sample phytochemical compounds and the aim of this study was to define a method to recognize the original products. **Methods:** The sample compounds were extracted by liquid-liquid method and evaluated by GC-MS and compared with the references like Adams 2007. The obtained phytochemical data were analyzed with SPSS and classified by dendrogram method and was compared with the data earned from the standard sample. **Results:** Forty one compounds were detected. Carvacrol was available in all samples from 1.14 to 39.34%. Also, thymol was present in most of samples from 1.24 to 69.32%. Moreover, we understood that some compounds like pulegone, carvone, carvacrol and piperitenone could be detected in all samples mostly with different percentages. Some linear hydrocarbon was detected in this method along with some other unexpected compounds like cinnamaldehyde. **Conclusion:** Existence of some impure compounds like: pulegone, carvone, piperitenone and cinnamaldehyde in trade samples showed cleaning of container might not have been proper. Carvacrol and thymol are common compounds to define acceptable standard for *Cichorium intybus* aromatic water.

**Keywords:** aromatic water, *Cichorium intybus*, GC-MS

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