## **CHAPTER 8**

## COMPARISON OF DIFFERENT COLD PRESSED SEED OILS IN TERMS OF SOME PHYSICOCHEMICAL PROPERTIES, BIOACTIVITY AND FATTY ACID COMPOSITION

Safa KARAMAN<sup>1</sup>

## 1. INTRODUCTION

Cold press extraction is a kind of extraction system for the oil from the oily seed. In this extraction there is no heat application compared to other extractions such as such as chemical and hot press extraction include processes like deodorizing and refining which affect the quality of phytocompounds (Ananth et al., 2019). Cold pressed oils according to Codex Alimentarius are the vegetable oils produced by only mechanical pressing without the application of heat and without disturbing the nature of the oil (Taşan and Imer, 2018).

Due to the cold pressed seed oils contained higher bioactive components and so theirpositive contributions to health, an increased interest to the cold pressed seed oil consumption of the consumers have been observed. Cold pressed seed oils having characteristic taste, with intense color and special aroma are appreciated by consumers (Matthaus and Brühl, 2003). These oils are used mainly in pharmaceutical and cosmetic industry but it has started to take its place in our tables because of their rich

Nigde Ömer Halisdemir University, Engineering Faculty, Food Engineering Department, 51240, Nigde-Türkiye \*Corresponding Author: safakaraman@ohu.edu.tr

## REFERENCES

- Ananth, D.A., Deviram, G., Mahalakshmi, V., Sivasudha, T., Tietel, Z., 2019. Phytochemical composition and antioxidant characteristics of traditional cold pressed seed oils in South India. Biocatalysis and Agricultural Biotechnology, 17: 416-421.
- Gürpınar, G.Ç., Geçgel, Ü., Taşan, M., 2011. Soğuk presyon tekniği ile üretilen bitkisel yağların özellikleri ve sağlık üzerine etkileri. 7. Gıda Mühendisliği Kongresi, Ankara.
- Janu, C., Kumar, S., Reshma, M.V., Jayamurthy, P., Sundaresan, A, Nisha, P., 2014. Comparative study on the total phenolic content and radical scavenging activity of common edible vegetable oils. Journal of Food Biochemistry, 38(1): 38-49.
- Matthäus, B., Brühl, L., 2003. Quality of cold-pressed edible rapeseed oil in Germany. Food/Nahrung, 47(6): 413-419.
- Parker, T.D., Adams, D.A., Zhou, K., Harris, M, Yu, L., 2003. Fatty acid composition and oxidative stability of cold-pressed edible seed oils. Journal of Food Science, 68(4): 1240-1243.
- Smeriglio, A., Galati, E.M., Monforte, M.T., Lanuzza, F., D'Angelo V., Circosta, C., 2016. Polyphenolic compounds and antioxidant activity of cold-pressed seed oil from Finola cultivar of Cannabis sativa L. Phytotherapy Research, 30(8): 1298-1307.
- Taşan, M., Imer, Y., 2018. Çeşitli soğuk pres yağların bazı mikro ve makro element içeriklerinin belirlenmesi. Tekirdağ Ziraat Fakültesi Dergisi, 15(1): 14-25.
- Yalcin, H., Karaman, S., Ozturk, I., 2011. Evaluation of antioxidant efficiency of potato and orange peels and apple pomace extracts in sunflower oil. Italian Journal of Food Science, 23: 55-61.
- Yildirim, E., Toker, Ö.S., Karaman, S., Kayacier, A., Doğan, M., 2015. Investigation of fatty acid composition and trans fatty acid formation in extracted oils from French-fried potatoes and classification of samples using chemometric approaches. Turkish Journal of Agriculture and Forestry, 39(1): 80-90.
- Yu, L.L, Zhou, K.K., Parry, J., 2005. Antioxidant properties of cold-pressed black caraway, carrot, cranberry, and hemp seed oils. Food Chemistry, 91(4): 723-729.