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POMEGRANATE AND GARDEN CRESS SEED OILS AS POTENTIAL SOURCES OF OMEGA FATTY ACIDS FOR OIL BLENDS BY

**Ghazal, M.S.¹; M.H.¹Kalyoubi,; R.M.¹;
Mahmoud, M.M.¹; Khallaf, Rania, I.M.
Al-Moselhy²**

*1-Food Sci. Dept., Fac. Agri., Ain-Shams Univ., Shoubra El-
Kheima, Egypt.*

*2- Oils and Fats Res. Dept., Food Tech. Res. Inst., Agric Res.
Center, Giza, Egypt.*

ABSTRACT

Fatty acids profile of pomegranate seed oil (PSO) and garden cress seed oil (GCSO) as well as their blends with sunflower seed oil (SFSO) at different ratios was chromatographically analyzed. The blending ratios of SFSO with PSO were 80:20, 60:40 and 40:60 (w/w), while blending ratios of SFSO with GCSO were 75:25 and 50:50 (w/w), respectively. PSO characterized by its higher content (84.16 %) of punicic acid (ω -5 fatty acid) which has beneficial effect on human health. Blending of SFSO with PSO resulted in reduction of linoleic acid ($C_{18:2}$) and an increase in punicic acid with increasing the ratio of PSO in the blend. However, blending SFSO with GCSO, the ω -3 fatty acids increased in blend samples as the ratio of GCSO increased. So, erucic acid in blends with GCSO did not exceed 5% in agreement with WHO recommendation for edible oils. Therefore, pomegranate and garden cress seed oils can be used as potential sources for improving the nutritional value with omega-3 and omega-5 acids in edible oils.

Key Words: garden cress seed oil, nutritional value. omega-3 fatty acid, pomegranate seed oil, punicic acid, Sunflower oil,