

# Textural properties and storage stability of organogels prepared from pomegranate seed oil with beeswax and sunflower wax

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Organogels from pomegranate seed oil (PO) with beeswax (BW) and sunflower wax (SW) were produced and followed for their textural and oxidative stabilities for 3 months storage. Organogel properties like oil binding capacity, gelation time, solid fat content, color, thermal properties, textural properties, X-ray diffraction measurement, polarized light microphotographs and peroxide values were measured. It was shown that both SW and BW have yielded stable, uniform and smooth gels with no increase in solid fat content. SW organogels had higher melting temperatures (59.27-64.06°C) and enthalpies (8.46-19.00 J/g) than that of BW organogels (45.78-51.29°C and 3.40-11.70 J/g). Generally, as added wax concentration increased, the firmness and stickiness were enhanced. The conclusions showed that the textural and oxidative stability of the organogels was good enough for practical applications. Hence, nutritionally important oil, pomegranate seed oil, can be utilized in spreadable fat and margarine formulations in the plastic fat form of the organogels.

**Keywords:** pomegranate seed oil, organogel, beeswax, sunflower wax, X-ray diffraction