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The Effect of Temperature on the Dynamic Viscosity of Acetone-Sunflower-Seed Oil Mixtures

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**Abstract:** The effect of acetone on the dynamic viscosity of sunflower-seed oil was studied under a dynamic heating regime at temperatures ranging from 25°C to 50°C at 5°C intervals. Acetone dramatically reduced the viscosity of sunflower-seed oil. The reduction of viscosity was far less with further addition of acetone. A linear relationship was found between the density of sunflower-seed oil and temperature. The influence of a solvent on the density of the sunflower-seed oil/acetone solution can be accounted for by the mixing theory of ideal solutions, whereas the effect of temperature on the dynamic viscosity of the oil solution is best described by a modified Arrhenius equation.

**Key Words:** Acetone/oil solution, density, modelling, sunflower-seed oil, temperature effect, viscosity.

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