

500e Effects of Acetic Acid, Salt, and Sucrose on Rheological Properties of Fluid Milk

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A simple viscometer is designed and fabricated to determine non-Newtonian behaviors of fluid food products, and a novel viscometer equation suitable for the viscometer is developed. Fluid milk, acetic acid, salt, and sucrose are chosen, since they are main ingredients in our daily food. The main objectives of this study are to examine effects of additive amounts such as sucrose, acetic acid, and salt on non-Newtonian behaviors of fluid milk, to design a simple viscometer for pseudoplastic fluids, and to develop a viscometer equation suitable for the viscometer in determining fluid consistency index and flow behavior index of fluid food products.

Non-Newtonian characteristics of fluid milk are extensively investigated in terms of the additive amounts such as acetic acid, salt, and sucrose with the viscometer and its viscosity equation. Water is used as a reference/calibration liquid for the viscometer.