RHEOLOGICAL PROPERTIES OF FOOD GELS

By

NADA YOUSSEF ISMAIL ABDO

B. Sc. Agric. Sc. (Agric. Engineering), Ain Shams University, 2009

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This thesis for M. Sc. degree has been approved by:

Dr. Manal Abd El-rahman Ali Sorour ……

Head Research of Agricultural Engineering and packaging foods, Food Technology Institute

Dr. Mubarak Mohammed Moustafa ……

Prof. Emeritus of Agricultural Engineering, Faculty of Agriculture, Ain Shams University

Dr. Hany Idress Khalil ……

Prof. of Food Engineering, Faculty of Agriculture, Ain Shams University

Dr. Moustafa Faheem Mohamed ……

Associate Prof. of Agricultural Engineering, Faculty of Agriculture, Ain Shams University

Date of Examination: / /

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Under the supervision of:

Dr. Mahmoud Ahmed El-Nono (Late).
Prof. Emeritus of Agricultural Engineering, Department of Agricultural Engineering, Faculty of Agriculture, Ain Shams University (Principal Supervisor)

Dr. Moustaf Faheem Mohamed
Associate Prof. of Agricultural Engineering, Department of Agricultural Engineering, Faculty of Agriculture, Ain Shams University

Dr. Hany Idress Khalil
Prof. of Food Engineering, Department of Food Science, Faculty of Agriculture, Ain Shams University

ABSTRACT

Nada Youssef Ismail Abdo: Rheological Properties of Food Gels. Unpublished M. Sc. Thesis, Department of Agricultural Engineering, Faculty of Agriculture, Ain Shams University, 2016.

The rheological properties of strawberry jam puree as a sample of some food gels were investigated using rotational viscometer over the range (30 – 70°C), different solid concentration of 40, 45, 50, 55 and 63 %. Shear rate – shear stress data indicate that the puree behaves as a Non-Newtonian pseudoplastic behavior, and fitted well to the power law model. The effect of concentration on the apparent viscosity of strawberry jam puree was fitted well to power law equation, the results observed that apparent viscosity increased with increasing the concentration of strawberry jam puree at all temperatures studied. The effect of temperature on the apparent viscosity of strawberry samples was fitted well to Arrhenius law. The activation energy was found in the range of 25.26–97.78 KJ/mol.

Keywords: Rheological properties; Viscosity; Food Gels; Activation energy; strawberry Creamy jam; Gels.

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