

Abstract Submitted
for the DFD15 Meeting of
The American Physical Society

Role of elasticity on the Rheological Response of the Uterus Tissue NARIMAN ASHRAFI KHORASANI, Young Researchers and Elites Club, Science and Research Branch, Islamic Azad University, PARASTOO PIROOZRAM, PNU — N. Khorasani and P. piroozram Department of Mechanical Engineering, Payame Noor University, 19395-3697, Tehran, Iran, The effect of uterus tissue viscoelasticity on its internal pressure is explored. The tissue of the uterus is presented by a linear viscoelastic model with two major time constants. A proper user defined function is developed and incorporated in the simulation software, to represent the model. The geometry of the uterus is separately modeled. It is found that viscoelasticity of the tissue which can be controlled and altered by change the concentration can directly affect its internal pressure. It is also observed that the pressure decreases as the moisture of the tissue is increased. The study is repeated for several practical conditions and parameters pertaining to the viscoelasticity of the tissue are evaluated.

NARIMAN KHORASANI
PNU

Date submitted: 15 Oct 2015

Electronic form version 1.4