

2008 Ohio Student Research Forum

The Ohio State University

August 7 - 8, 2008

RESEARCH ABSTRACT FORM

TITLE: Dilute Solution Viscosity Measurements

AUTHOR: Bridnee Smith

MENTOR(S): Dr. Jude O. Iroh

INSTITUTION: University of Cincinnati

The purpose of our research was to investigate the viscosity of diluted polymer solutions. Viscosity is importance to engineers because viscosity is an important characteristic for all materials, especially polymers. For liquids, viscosity will influence flow characteristics, heat transfer, and mass transfer. For polymers, viscosity is used as a measuring stick. Since it is not really possible to find the viscosity of a solid, we dissolve it in a solvent. From the data collected from the measurements of viscosity of the diluted solutions, we can find different characteristics of the polymer. We can calculate the molecular weight from the data also. By measuring the viscosity of polymer solutions, we can determine which concentration of the solution would be the best to use for applications such as coating, and adhesives.