

## **ABSTRACT**

*One of the most commonly methods of polymer particle manufacture is the electrospray method. This method applies the concept of the electric field and its interaction with the solution. In this research has been studied about polymer synthesis by using electrospray system utilize high voltage source. The use of the solution as the main material of polymer manufacture is stored on the syringe. The selection of the solution determined by several parameters namely viscosity, conductivity, and surface tension. In this study, Polyethylene Glycol (PEG) was used as the main material because it meets the above parameters. The results of this study explain that polymer particle size of particle synthesis based on electrospray system can be set by concentrate, voltage, and distances between needle and collector plate.*

***Keywords: Electrospray, polymer, solution, syringe***