ABSTRACT

Spray drying is a tool that can reduce the moisture content of a material and can turn liquid into powder using a hot drying medium so that the heated water content evaporates. Parameters that affect the process of spray drying are temperature, air flow rate, and moisture content of the material. In this final project, a characterization process is carried out to determine the character of spray drying using four stages of heating. The most important spray drying design process is the placement of the heater and also the anticipation that the heater is not affected by outside temperatures by coating the heater using glass wool that is resistant to high temperatures. The solution used in this test is PVP (Polyvinyl Pyrolidone) which has a concentration of 4%. In this study it was found that the distance between heaters affects the amount of heat transfer that occurs between heaters. Then, the temperature used affects the size of the resulting particles. Higher temperatures produce particles that have a smaller diameter.

Keywords: Spray Drying, Atomizer, Heater, PVP