

Thesis Title	Power Control of Microwave Heating for Controllable Temperature Drying Process
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ABSTRACT

The study of this thesis aims to develop a controlling temperature system of 2450 MHz microwave heating in order to fix temperature for a certain period of time. Feedback temperature technique was used for developed control system. Application of this study could be used for microwave heating process is which temperature is able to be controlled for example drying process. Typical 30 L microwave dryer, TOSHIBA model ER-A7CS, accompanied with non rotation disk energy distribution system was modified for this study. Detected temperature using Thermopile sensor model TPA81 was sent to the developed controlling temperature system. The result of testing of microwave heating water revealed a perfect controlling of developed system along the period of testing. The tests of slide lemon grass drying from 450 g to 45 g at temperature 40, 50, 60 and 70 °C using input energy of microwave 0.5, 1.0, 1.5 and 2.0 W/g were found that this developed system was able to control drying product temperature for all testing.