

In the process of instant noodle production, noodle plate is pre-dried by using hot air from oven to reduce moisture content. After that noodle plate is aged about six hours or over night for the equilibration of noodle condition. After aging, noodle plate will be separated and cut into desirable size. Loss of noodle will be developed during separation. Study of aging process by using heat pump dryer and the quality of noodle at different conditions will be done to prevent the loss and reduce processing time. Result of the study will be developed to design continuous processing of instant noodle.

The study was divided into two sessions. The first one involved with the study and the examination of the properties of noodle during the production processing line of the plant and also compared the properties with noodle aged in heat pump dryer at various conditions. The experiment results indicated that the optimum condition were to cool the noodle plate at 15°C for 12 minutes then heat up to 35-40°C for 18 minutes and the quality of the noodle was acceptable.

The results of the first session were used in second one to design a heat pump dryer for the production of the instant noodle plant. The heat pump dryer unit composes of two parts: (1) Cool air chamber temperature at 15°C dimension of 0.96 m width, 6.70 m length, 15 layers and 2 sets of air conditioner of 2.5 tons of refrigeration consisting of a compressor, an evaporator and 3 axial flow fans each. (2) Warm air chamber temperature at 35-40°C dimension of 0.96 m width, 10.08 length, 15 layers and 4 condensing unit with 3 axial flow fans each.