STUDY RATE DRYING SALT

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ABSTRACT

Drying of salt was worked to determine the end quality of product. As before the salt was washed to eliminate impurities.

This research has goal to determine the curve characteristic of drying salt, determine an effect of research variable to drying rate, and looking for heat transfer coefficient.

Material that used (salt) has size 40-50 mesh, and drying at tray dryer of laboratory scale. There are some variables of drying conditions, three hot air temperature (70, 80, dan 90°C), three air speed (0.4, 0.7 dan 1 m/s), and three sample thickness (3, 5 dan 7 mm). Experiment data could be curved with some coordinate as drying rate, moisture content, and time.

Experiments result showing, temperature has crucial effect to drying rate, rate at highest temperature 90 ºC (0,01792 gr/cm².jam) is twice than temperature 70 ºC (0,08857 gr/cm².jam). Air speed take a little effect to raising the rate, at 1 m/s (0,0108 gr/cm².jam) than 0.4 m/s (0,0101 gr/cm².jam). Sample thickness has a great concern to determine drying time, not too much to drying rate, at 3 mm sample (540 minute), 5 mm (760 minute), and 7 mm (870 minute).

Keywords : salt, tray dryer, drying rate