ABSTRAK

PENGARUH UKURAN POTONGAN WORTEL (*Daucus carota*) TERHADAP KARAKTERISTIK DAN DAYA ABSORPSI HASIL PENGERINGAN WORTEL KERING

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Wortel merupakan sumber vitamin A dan K yang mudah didapatkan pada sayuran. Majunya teknologi membuat masyarakat menuntut alternatif dari bahan segar yang berumur simpan pendek dan kurang praktis dalam pengolahannya menjadi produk instan. Pengolahan wortel menjadi bahan pangan instan umumnya dilakukan dengan mengeringkan potongan kecil wortel menjadi sayuran kering. Penelitian ini bertujuan untuk mengetahui pengaruh variasi ketebalan potongan wortel terhadap laju penurunan kadar air wortel dan pengaruh suhu perendaman pada proses absorpsi terhadap perubahan karakteristik potongan wortel setelah dikeringkan.

Metode penelitian menggunakan variasi ketebalan potongan wortel sebesar 2 mm, 4 mm, dan 6 mm dan suhu perendaman sebesar 50°C, 70°C, dan 90°C. Sampel berupa wortel segar seberat 200 gram dikeringkan dengan alat pengering tipe rak dan suhu pengeringan sebesar 60°C. Selanjutnya, wortel kering direndam untuk proses absorpsi di dalam water batch selama 10 menit. Parameter penelitian yang diukur adalah laju penurunan kadar air wortel selama pengeringan, perubahan bobot, tingkat kekerasan, dan ketebalan setelah proses absorpsi.

Hasil penelitian menunjukkan bahwa penurunan kadar air pada saat pengeringan dipengaruhi oleh ketebalan. Wortel dengan ketebalan potongan sebesar 2 mm mengalami penurunan paling cepat daripada ketebalan 4 mm dan 6 mm. Proses absorpsi meningkatkan bobot potongan wortel dan ketebalan wortel serta menurunkan tingkat kekerasan wortel kering. Namun uji ANOVA menunjukkan variasi suhu perendaman tidak memberikan perbedaan yang signifikan terhadap perubahan karakteristik wortel kering.

Kata Kunci : wortel, pengeringan, absorpsi, pengering tipe rak

ABSTRACT

THE EFFECT OF CARROT SLICE THICKNESS (*Daucus carota*) TO CHARACTERISTICS AND ABSORPTION ABILITY OF CARROT DRYING RESULTS

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Carrots are a source of vitamin A and K that are easily found. The development of technology demands an alternative of fresh products that are short-lived and less practical in processing become instant products. Carrot processing to instant food is generally done by drying small pieces of carrots into dried vegetables. Drying can facilitate the processing and increase saving time. This study aims to determine the effect of thickness variation of carrot slice to the decrease rate of carrot water content and the effect of immersion temperature on the absorption process to change the characteristic of carrot slice after drying.

Research method using variation of thickness carrot pieces amounted of 2 mm, 4 mm, and 6 mm and immersion temperature of 50°C, 70°C, and 90°C. The samples are fresh carrot of 200 grams weight dried with rack type drier and temperature of 60°C. Then, dry carrot immersed for absorption process in water batch during 10 minutes. Research parameters that measured are decreasing rate of carrot water content during drying process, the change of carrot weight, hardness rate, and thickness after absorption process.

The results of this research showed that the decrease of water content during drying process was influenced by thickness. Decreasing rate of water content of carrots with a thickness of 2

mm faster than the thickness of 4 mm and 6 mm. The absorption process increased the weight of carrot and carrot thickness and decreases the hardness of dry carrots. However, the ANOVA test showed that the variation of immersion temperature did not give significant difference to change of dry carrot characteristics.

Keywords: carrot, drying, absorption, rack type dryer