

# **Pengaruh Beberapa Metode Pengeringan dan Penggunaan CMC (Enkapsulasi) terhadap Kualitas dan Viabilitas Mikroba BAL (Bakteri Asam Laktat) Dadih Bubuk yang Dihasilkan**

Rahima Putri, Alfi Asben, dan Wenny Surya Murtius

## **ABSTRAK**

Penelitian ini bertujuan untuk mengetahui pengaruh metode pengeringan dan konsentrasi bahan penstabil CMC terhadap dadih bubuk. Penelitian menggunakan Rancangan Acak Kelompok yang terdiri dari dua kelompok, tiga perlakuan dan tiga ulangan, yaitu metode pengeringan dengan penambahan konsentrasi CMC (A<sub>1</sub> (*freeze drying* : 0% CMC), B<sub>1</sub> (*freeze drying* : 1% CMC), C<sub>1</sub> (*freeze drying* : 2% CMC), A<sub>2</sub> (oven vakum : 0% CMC), B<sub>2</sub> (oven vakum 1% CMC), C<sub>3</sub> (oven vakum 2% CMC)). Parameter yang diamati yaitu kadar protein, total asam, pH, total bakteri asam laktat, kadar air, total padatan, kadar lemak, viabilitas BAL, viskositas, dan organoleptik. Hasil penelitian menunjukkan penambahan konsentrasi bahan penstabil dan metode pengeringan memberikan pengaruh yang nyata terhadap kadar air, protein, lemak, total padatan, namun tidak berpengaruh nyata terhadap pH dan total asam. Hasil uji organoleptik menunjukkan perlakuan B<sub>1</sub> (*freeze drying* dengan penambahan 1% CMC) sebagai produk yang paling disukai dengan rentang skor untuk warna (4,0), aroma (3,4), tampilan (3,8) dan konsistensi (3,9), dengan rata-rata hasil analisis yaitu: kadar air (10,19%), protein (10,61%), lemak (39,51%), pH (4,73), total asam (0,64%), total padatan (89,81%), total bakteri asam laktat ( $2,1 \times 10^6$  cfu/ml), viabilitas BAL (82,81%), dan viskositas dadih rehidrasi (22,40 dPas).

*Kata Kunci* : dadih, pengeringan, *freeze drying*, oven vakum, CMC

# The Effect of Drying Methods and Used CMC (Encapsulation) Toward Quality and LAB (*Lactic Acid Bacteria*) Microbial Viability of Dadih Powder

Rahima Putri, Alfi Asben, and Wenny Surya Murtius

## ABSTRACT

This research was aimed to determine the effect of drying method and the concentration of stabilizer CMC toward dadih powder. The research used randomized block design consisting of two groups, three treatments and three replications, the combination of drying with CMC concentration added (A<sub>1</sub> (freeze drying: 0% CMC), B<sub>1</sub> (freeze drying: 1% CMC), C<sub>1</sub> (freeze drying : 2% CMC), A<sub>2</sub> (vacuum oven: 0% CMC), B<sub>2</sub> (vacuum oven 1% CMC), C<sub>3</sub> (vacuum oven 2% CMC). Parameters observed protein content, total acid, pH, total lactic acid bacteria, moisture content, total solids, fat content, LAB viability, viscosity, and organoleptic properties. Results showed CMC concentration variety to a drying method had an influence toward moisture, protein, fat content, total solids and viscosity, but it had not significant effect on pH and total acid. The best product based on organoleptics was treatment B<sub>1</sub> (*freeze drying* with 1% addition) with values of colour of 4,0, aroma of 3,4, appearance of 3,8, and consistency of 3,9. The average value of each analysis was: water content of 10,19%, protein of 10,61%, fat content of 39,51%, pH of 4,73, total acid of 0,64%, total solids of 89,81%, total lactic acid bacteria of  $2,1 \times 10^6$  cfu/ml, LAB viability of 82,81%, and the viscosity of after rehydration of 22,40 dPas.

*Keywords* : dadih, drying, freeze drying, oven vacuum, CMC