

PENGARUH LEVEL PEMBERIAN ANTIOKSIDAN TERHADAP KUALITAS FISIKO-KIMIA DAN ORGANOLEPTIK MENTEGA SUSU SAPI

Arnita Dewi Nurasri
16/394443/PT/07116

INTISARI

Penelitian ini bertujuan untuk mengetahui karakteristik fisiko-kimia dan organoleptik mentega sapi dengan penambahan antioksidan *Butylated hydroxytoluene* (BHT) yang berbeda (25 ppm dan 50 ppm) terhadap daya simpan mentega. Pengujian karakteristik fisika, kimia dan organoleptik mentega dilakukan pada hari ke 0, 15, dan 30. Pengujian dilakukan menggunakan 3 replikasi. Bahan baku susu segar, krim, karakteristik fisik mentega, dan asam organik di analisis secara deskriptif. Analisis organoleptik dianalisis menggunakan analisis non-parametrik Kruskal-Wallis Test. Komposisi kimia mentega (kadar lemak, *solid non fat*, kadar air dan *total solid*) dianalisis dengan analisis deskriptif. Bilangan peroksida, angka asam dan nilai pH dianalisis secara faktorial (3x2). Hasil analisis yang berbeda nyata diuji lanjut dengan Duncan. Hasil penelitian menunjukkan bahwa kualitas rata-rata bahan baku susu segar untuk pembuatan mentega normal. Mentega dengan kadar BHT 25 ppm memiliki kekerasan yang lebih rendah, lebih cepat meleleh ($P < 0,05$), memiliki bilangan peroksida lebih banyak dan nilai angka asam yang lebih kecil ($P < 0,05$) dibanding dengan mentega dengan kadar BHT 50 ppm. Mentega sapi yang disimpan pada suhu 5°C semakin lama semakin sulit untuk di oles. Perubahan jumlah asam laktat dan asam asetat cenderung stabil pada kedua perlakuan mentega, namun terjadi kenaikan yang tinggi pada jumlah asam butirat pada mentega dengan kadar BHT 25 ppm. Penilaian organoleptik pada mentega yang diberi perlakuan BHT 25 ppm dan 50 ppm BHT menunjukkan adanya penurunan nilai kesukaan, keasinan, kehalusan, aroma pada kedua perlakuan mentega dan terjadi peningkatan nilai daya oles mentega selama penyimpanan 30 hari. Berdasarkan hasil penelitian dapat disimpulkan bahwa pemberian BHT kadar 50 ppm lebih mampu menjaga kualitas fisiko-kimia mentega sapi selama penyimpanan 30 hari, namun pemberian BHT 25 ppm lebih disukai oleh panelis.

Kata kunci : Mentega sapi, *Butylated hydroxytoluene* (BHT), Kualitas fisika, Kualitas kimia, Kualitas organoleptik

PHYSICO - CHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF COW BUTTER ADDED WITH ANTIOXIDANT

Arnita Dewi Nurasri

16/394443/PT/07116

ABSTRACT

This study was aimed to determine the physico-chemical and organoleptic characteristics of cow's milk butter with different level of *Butylated hydroxytoluene* addition (25 ppm and 50 ppm) during storage in refrigerator temperature (5°C). Physico - chemical and organoleptic tests was carried out at 0, 15 and 30 days of storage with 3 replications. Descriptive analysis was carried out to determine the quality of raw milk, cream, organic acid and physical characteristics of the butter. Sensory properties were evaluated with non-parametric analysis, Kruskal Wallis test. Butter chemical composition (fat content, solid non fat, water content and total solid) was analyzed with descriptive analysis. Peroxide value, acid value and pH was analyzed with (3×2) factorial. The significantly different result was further tested with Duncan further test. The test result indicated the milk used for butter making was on normal condition. Butter with 25 ppm BHT level had higher hardness and shorter melting time ($P < 0,05$) than butter with 50 ppm BHT level. Butter spreadability increased during 30 days of storage at refrigerator temperature (5°C). Peroxide value of butter with 50 ppm BHT level was lower and had higher acid value than butter with 25 ppm BHT level ($P < 0,05$). BHT level had no significant effect on butter pH during 30 days of storage. There was only slight increase on acetic and lactate acid level during storage. Butyric acid for both BHT level had significantly increased during storage. The organoleptic test showed that during storage, spreadability score of butter from both level was decreasing, but overall acceptability, salty, sandy and after odor parameters of both BHT level butter had high score preference level from panelist. In conclusion, butter with 50 ppm BHT was better at keeping its physico-chemical quality during 30 days of storage, yet butter with 25 ppm BHT was preferable in organoleptic.

Keyword : Cow butter, *Butylated hydroxytoluene* (BHT), Physical properties, Chemical properties, Organoleptic test.