PERILAKU STABILITAS RETENSI KOMPONEN FLAVOR DARI GOLONGAN TERPENOID PADA SISTEM ENKAPSULASI

Stability Behaviour of Flavor Compound Retention of Terpenoid at Encapsulation System

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ABSTRAK

Lima komponen flavor golongan terpenoid, yaitu α-pinene, myrcene, limonene, linalool, dan α-terpineol dienkapsulasi dengan hidrolisat pati stearat dan hidrolisat pati propionat dengan menggunakan pengering semprot pada nisbah komponen flavor/pati termodifikasi adalah 20:80. Produk flavor terenkapsulasi dikemas dalam kantong plastik dan disimpan pada suhu 45°C selama 9 minggu. Produk flavor terenkapsulasi dianalisis dengan scanning electron microscopy dan retensi flavor dengan gas kromatografi. Hasilnya menunjukkan bahwa permukaan partikel-partikel flavor terenkapsulasi adalah kasar, berlubang pada bagian tengahnya dengan lekukan cekung. Komponen-komponen flavor menempel pada dinding enkapsulan. Retensi komponen flavor selama penyimpanan menurun. Setelah collaps, retensi komponen flavor stabil dan akhirnya menurun. Retensi komponen flavor yang paling cepat penurunannya adalah myrcene, diikuti dengan limonene, α-pinene, linalool, dan α-terpineol

Kata kunci: *flavor, enkapsulasi, pati termodifikasi, stabilitas retensi, pengeringan semprot*

ABSTRACT

Five flavor compounds of terpenoid, i.e α-pinene, myrcene, limonene, linalool, and α-terpineol were encapsulated with starch hydrolyzates, namely starch stearate and starch propionate by spray drying at flavor compounds/modified starch ratio 20:80. The encapsulated flavor products were stored in plastic bag at 45°C for 9 weeks. The encapsulated flavor products were analyzed by scanning electron microscopy and flavor retention using gas chromatography. Results indicated that the surfaces of particles of encapsulated flavor were rough, hollow in the middle, with a concave radius of curvature. The flavor compounds were entrapped within the encapsulant wall. The retention of flavor compounds during storage decreased. After collapsed, retention of flavor compounds was stable and finally decreased. The highest decrease in retention of encapsulated flavor compounds was myrcene, followed by limonene, α-pinene, linalool, and α-terpineol.

Keywords: *flavor, encapsulation, modified starch, retention stability, spray drying*

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