

INTISARI

Melon cv. Hikapel merupakan salah satu jenis kultivar baru yang dikembangkan oleh Universitas Gadjah Mada memiliki keunggulan umur simpan relatif panjang, warna daging buah orange, memiliki rasa manis dan aroma yang khas. Warna orange pada daging buah tersebut mengindikasikan adanya kandungan karotenoid. Enzim *Carotenoid cleavage dioxygenase* (CCD) akan menghasilkan volatil yang harum aromanya. Penelitian ini bertujuan untuk mengidentifikasi aktivitas enzim *Carotenoid cleavage dioxygenase* (CCD) dan profil senyawa volatil turunan karotenoid serta warna buah melon selama penyimpanan 21 hari. Buah melon disimpan selama 21 hari pada suhu rendah (16°C) dan suhu ruang (25°C). Pengamatan dilakukan pada hari ke-0, 7, 14 dan 21 hari. Analisis warna buah melon dilakukan menggunakan alat chromameter, aktivitas enzim *Carotenoid cleavage dioxygenase* (CCD) diamati dengan spektrofotometer, profil senyawa karotenoid diamati menggunakan HPLC-PDA, dan profil senyawa volatil diamati menggunakan GC-MS. Hasil penelitian menunjukkan bahwa terjadi perubahan nilai *lightness*, *chroma* dan *hue* warna kulit dan daging buah selama penyimpanan. Profil karotenoid teridentifikasi 4 senyawa yaitu *α-caroten*, *β-caroten*, *zeaxantin* dan *lutein*. Aktivitas enzim mengalami peningkatan aktifitas maksimum pada hari ke-7 dan selanjutnya terjadi penurunan aktivitas sampai hari ke-21. Profil volatil buah melon kultivar Hikapel teridentifikasi 106 senyawa terdiri dari 5 senyawa golongan *terpenoid*, 12 senyawa golongan *benzene*, 24 senyawa golongan *hidrokarbon aromatik*, 3 senyawa golongan *ester*, 10 senyawa golongan *alkena*, 2 senyawa golongan *aldehid*, 18 senyawa golongan *naphthalene*, 2 senyawa golongan *phenol*, 2 senyawa golongan *sulfur*, 14 senyawa golongan *asam* dan 14 senyawa golongan *alkohol*.

Kata kunci : *Cucumis melon* L. cv.Hikapel, volatil, karotenoid, aktivitas enzim *Carotenoid cleavage dioxygenase*, warna, penyimpanan suhu 16°C dan 25°C.

ABSTRACT

Melon cv. Hikapel is one of new cultivars developed by Universitas Gadjah Mada. This cultivar have a relatively long shelf life, orange flesh color, sweet taste and a distinctive aroma. The orange color of the flesh indicates the presence of carotenoids. Carotenoid cleavedioxygenase (CCD) will produce a fragrant volatile compounds. This work aimed to identify the activity of Carotenoid cleavedioxygenase (CCD) enzyme, profil of carotenoids and volatile compounds derived from carotenoids and the flesh color of Hikapel melon during the 21 days storage. Melons were stored for 21 days at air conditioned room of 16°C and 25°C). Observations were performed in every 7 days until 21st day. Analysis of melon flesh color was performed using chromameter, Carotenoid cleavedioxygenase (CCD) enzyme activity observed using spectrophotometer, carotenoid compounds was observed using HPLC-PDA, and volatile compounds profile was observed by GC-MS. The results showed that there was a change in lightness, chroma and hue values of rind color and flesh during storage. The carotenoid profile identified four compounds namely α -carotene, β -carotene, zeaxanthine and lutein. Maximum enzyme activity obtained on the 7th day and subsequently decreased until 21st day. There were 106 volatile compounds of melon Hikapel were identified. Among them there x compounds that derived from carotenoids, namely/consisting 4-(prop-2-en-1-yl phenol), β -terpinene, β -cymene, and p-Cymene, as the volatiles have increased during storage.

Keywords: *Cucumis melon* L. cv.Hikapel, volatile, carotenoid, enzyme activity *carotenoid cleavage dioxygenase*, color, storage temperature 16°C and 25°C.