

BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Dari pengujian kualitatif didapatkan kesimpulan bahwa fullerene dapat melindungi manik-manik UV dari paparan sinar UV daripada manik-manik yang hanya dilumuri sampel A dan yang tidak dilumuri apapun. Hal tersebut didukung oleh hasil intensitas rata-rata dari gambar manik-manik UV yang diambil ketika 10 s dan 60 s yang menunjukkan selisih intensitas rata-rata manik-manik UV yang dilumuri sampel B, C, D, E, dan G memiliki rentang yang lebih kecil (0,13 hingga 1,09). Untuk manik-manik UV yang tidak dilumuri apapun dan yang dilumuri sampel A, F, dan H memiliki rentang selisih intensitas rata-rata sekitar (1,59 hingga 11,45).

Dari hasil yang didapatkan selama pengambilan data dengan UV spektrofotometer, dapat disimpulkan bahwa dengan adanya kandungan fullerene dalam produk perawatan kulit dapat membuat tingkat penyerapan terhadap sinar UV lebih tinggi. Kesimpulan tersebut didapatkan setelah membandingkan hasil sampel yang mengandung fullerene (sampel E dan G) dengan sampel yang tidak mengandung fullerene (sampel F dan H). Dilihat dari pengujian kuantitatif sampel B, C, D, E, dan G, dengan adanya komposisi lain pada produk perawatan kulit maka terdapat pergeseran puncak. Untuk fullerene murni berdasarkan literatur puncak penyerapan tertinggi yang berada pada rentang panjang gelombang sinar UV berada pada panjang gelombang 145.5 nm, 228 nm, 270.5 nm, dan 351 nm sedangkan untuk fullerene yang berada dalam air panjang gelombang penyerapan tertinggi pada rentang panjang gelombang sinar UV terletak pada 220 nm, 265 nm, 345 nm. Berdasarkan hasil pengujian UV spektroskopi didapatkan hasil sampel B, C, D, E, dan G memiliki puncak penyerapan tertinggi sekitar panjang gelombang 253 nm hingga 257 nm. Dari hasil analisis tersebut didapatkan kesimpulan bahwa komposisi dominan yang dapat menyebabkan pergeseran puncak penyerapan maksimum adalah methylparaben dan air. Berdasarkan analisis semua data, puncak penyerapan sampel yang mengandung fullerene terletak pada rentang panjang gelombang sinar UVC.

5.2 Saran

Dilihat dari hasil penelitian yang dilakukan penulis, penulis menyarankan untuk menggunakan fullerene lebih banyak dalam produk perawatan kulit agar lebih optimal manfaatnya. Tentunya penggunaan fullerene masih harus sesuai dengan dosis aman pemakaian pada manusia. Dilihat dari beberapa penelitian terdahulu, fullerene merupakan material yang berpotensi maju dalam bidang kecantikan, karena manfaat-manfaatnya yang cukup banyak. Tetapi mungkin lebih baik memperbanyak penelitian fullerene yang berkaitan dengan sifat optiknya, salah satunya terhadap penyerapannya pada sinar UV. Oleh karena itu penulis menyarankan untuk penelitian terkait keefektifan fullerene untuk perlindungan kulit terhadap sinar UV masih harus banyak dilakukan, diharapkan adanya penelitian yang lebih banyak dan mendalam terkait hal ini. Jika nanti ada yang melakukan penelitian terkait topik serupa diharapkan komposisi fullerene dalam produk perawatan kulit dapat diketahui agar lebih mudah dalam menyimpulkan terkait jumlah fullerene dan penyerapannya dalam sinar UV.

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