Bölüm 8

TİCARİ *CİTRUS SİNENSİS* (L.) OSBECK UÇUCU YAĞININ ANTİOKSİDAN KAPASİTESİNİN SPEKTROFOTOMETRİK YÖNTEMLE ANALİZİ

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1. GİRİŞ

Doğal ürünler, ilaç keşfi için zengin bir bileşik kaynağı olmuştur ve sentetik bileşiklerden daha büyük ölçekli yapısal çeşitlilik sunmaktadır. Doğal ürünler biyoaktif ajanların başlıca kaynağı olmuştur ve yeni ilaçların keşfinde öncü olmaya devam etmektedir (1). *Citrus lemon* (limon), *C. medica* L. (ağaç kavunu), *C. x aurantium* L. (turunç), *C. paradisi* Macfad. (greyfurt), *C. reticulata* Blanco (mandarin, mandalina), *C. clementina* (klementin) ve *C. sinensis* (L.) Osbeck (tatlı portakal) gibi çeşitli narenciye türlerinin çeşitli faydası vardır (2). Portakal ağacı; Rutaceae familyasına ait dikenli ve bin yıllık küçük bir ağaçtır. Boyu tipik olarak 7,5 m'ye kadar büyür ve bazen 15 m'ye kadar yüksekliklere ulaşmaktadır. Portakal ağacı tropikal, yarı tropikal ve sıcak ılıman bölgelerde yetişir ve dünyada en yaygın olarak yetiştirilen meyve ağacıdır (3, 4). Portakal, dünyadaki en popüler meyvedir. Taze olarak yenmektedir veya meyve suyu olarak tüketilmektedir. Ayrıca, portakal meyveleri ve kabukları tatlılar, reçeller, marmelatlar, şekerlenmiş kabuklar, kurabiye, kek ve şekerlemelerde kullanılmaktadır. Portakal kabuğu, çiçek, yaprak ve dallardan elde edilen esansiyel yağlar, parfümeride kullanılmaktadır; portakal tohumunun yağı, yemek ve plastik endüstrisinde bir bileşen olarak da kullanılmaktadır (4). *C. sinensis*, bağışıklık sistemi aktivitesini destekleyen doğal bir antioksidan olan zengin bir C vitamini kaynağıdır (5, 6). *C. sinensis* geleneksel

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6. SONUÇ

Portakal uçucu yağı uzun zamandır antiseptik, dezenfektan ve çeşitli hastalıkların tedavisinde kullanılmaktadır. Portakal uçucu yağının antioksidan özelliği olduğu açığa çıktıktan sonra gıda sanayisinde yerini almıştır. Yapılan bu tez çalışmasında ticari olarak temin edilen *C. sinensis* (L.) Osbeck uçucu yağının antioksidan özelliği araştırılmıştır. DPPH yöntemi kullanılarak yaptığımız bu çalışmada IC_{50} değerine bakılmış ve bu sonuca göre $EC_{50,}$ ARP ve AEAC değerleri hesaplanmıştır. Elde edilen sonuçlar incelendiğinde *C. sinensis* uçucu yağının doğal antioksidan kaynağı olduğu görülmüştür.

C. sinensis uçucu yağı ticari olarak temin edilmek yerine damıtma, ekstraksiyon veya mekanik yöntemler kullanılarak da uçucu yağı elde edilip çalışma yapılabilmektedir. Ancak bunun için bitkinin meyve kabuklarındaki uçucu yağ oranının en yüksek seviyede olduğu dönemler tercih edilmelidir. Farklı yöntemlerin kullanılarak uçucu yağın antioksidan kapasitesinin değerlendirilmesi literatüre katkı sağlayacaktır.

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