



### Ette Katkı ve Kalıntı Analizleri

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#### 6.1. Et ve Et Ürünlerinde Kalıntı Analizleri

Et ürünleri işleme sürecinde farklı üretim uygulamalarına tabi tutulmaktadır. En temelinde ısıl işlem uygulaması yer alan bu tekniklerin kullanılması ve süre kavramları ette son ürün karakterini etkilemektedir. Ayrıca ürün formülasyonunda bulunan yağ-protein gibi temel bileşenler ile ürün özelliklerini iyileştirmek için eklenen çeşitli katkı maddelerinin reaksiyona girmesi neticesinde farklı ve tüketildiği takdirde zararlı olan bileşenler oluşabilmektedir. Öte yandan depolama süreçlerinde işlenmiş et ürünlerinde hoşça gitmeyen, duyuusal tercihleri etkileyen dönüşümler olduğu gibi insan tüketimine uygun olmayan başta kanser olmak üzere çeşitli hastalıklara neden olabilecek bileşenler meydana gelebilmektedir. Ayrıca hayvan beslemesi ile başlayan ve veteriner ilaç kalıntıları da dahil olmak üzere çevresel nedenlerle et ve ürünlerine bulaşmış kalıntıların da tespit edilmesi önemlidir. Bu kalıntılar bazen veteriner ilaçları olabildiği gibi bazen hayvan beslemesinde kullanılan yemler ya da sulardan geçen zararlı bileşenler ya da ağır metaller olabilmektedir. Bu nedenle et ve et ürünlerinde çeşitli yollar ile bulaşan ya da oluşan kalıntıların tespit edilmesi ve miktarlarının azaltılması çalışmalarının yapılması her daim güncel ve önemini koruyan çalışmalar olmaktadır.

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### 6.3. Sonuç ve Öneriler

Değişen dünya düzeni ve bazı sağlık sorunları ile son dönemlerde vegan-vejeteryan beslenme yaygınlaşsa da et ve et ürünleri her dönem tercih edilebilirliğini korumaktadır. Fakat tüketicilerin daha az katkı maddesi kullanımını tercih etmesi ve daha sağlıklı ürünler tüketmek istemesi tüm gıda gruplarında olduğu üzere et ve ürünlerinde de katkı ve kalıntı analizlerini önemli kılmıştır. Tüketiciler artık daha az kanserojen bileşen içeren ve daha az işlenmiş et ürünleri tercih ederken ürünlerde kullanılan gıda katkı maddelerinin de doğal olmasını istemektedir. Bu açıdan değerlendirildiğinde katkı ve kalıntı analizleri yasal sınırları belirlemek ve tüketicilere güvenli ürünler sağlayabilmek açısından kıymetli olmaktadır. Bu bölümde hali hazırda geliştirilmiş son analiz tekniklerinden bahsedilmiştir. Fakat katkı ve kalıntı analizleri genellikle kromatografik ve enstrümental analizler olduğu için maliyetli analizlerdir. Değişen ve gelişen teknoloji ile özellikle analiz ön işlem aşaması olan analiz materyalini ekstrakte etme süreçlerinde yenilikler olmaktadır. Kromatografik teknikler değişmeye ve gelişmeye devam ettikçe daha doğru, kesin ve tekrarlanabilir analiz sonuçları elde edilen yöntemler geliştirilecektir.

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