

Fresh meat packaged under a protective atmosphere with high oxygen content does not constitute a health hazard for the consumer

BfR Opinion Nr. 038/2010, 6 August 2010

Fresh meat and fresh meat products available at the self-service counter at the supermarket are often packaged under a protective atmosphere with high oxygen content. These are labelled “packaged in a protective atmosphere”. This kind of packaging is meant to warrant extended durability of the sensitive meat. If meat, which naturally contains cholesterol, comes into contact with oxygen, so-called cholesterol oxidation products (COPs) can be formed. A finalised assessment of the health effects of these on humans has not been completed. The Federal Institute for Risk Assessment (BfR) has been asked to assess the health risk of fresh meat packaged under a protective atmosphere with high oxygen content. The Institute has concluded that, according to the present state of knowledge, it is highly likely that consumers take in only small amounts of additional cholesterol oxidation products through these products. Meat packaged under a protective atmosphere thus poses no identifiable health risk.

Cholesterol oxidation products can occur naturally in a variety of foods if the cholesterol contained in these reacts with the oxygen in the air. These include hard smoked sausages such as salami or raw ham as well as cooked meat which is stored for longer periods of time. It is known that COPs can develop when matured meat is produced traditionally. If this ubiquitous exposure of consumers to cholesterol oxidation products is taken into account, the additional intake through meat packaged in a protective oxygen atmosphere becomes insignificant.

The full version of this BfR Opinion is available in German on http://www.bfr.bund.de/cm/208/keine_gesundheitliche_gefaehrdung_des_verbrauchers_durch_unter_sauerstoff_schutzgas_verpacktes_frischfleisch.pdf