



**Consumer Federation of America**



January 17, 2006

Division of Dockets Management (HFA-305)  
Food and Drug Administration  
Department of Health and Human Services  
Room 1061  
5630 Fishers Lane  
Rockville, MD 20852

To Whom It May Concern:

This letter addresses the November 15, 2005 Citizen Petition submitted by Kalsec, Inc., requesting that the Food and Drug Administration (“FDA”) prohibit the use of carbon monoxide in the packaging of fresh meat. Consumer Federation of America and Safe Tables Our Priority support this petition for the reasons outlined below.

Consumer Federation of America (“CFA”) is a non-profit association of 300 consumer groups, representing more than 50 million Americans. It was established in 1968 to advance the consumer interest through research, education and advocacy. The Food Policy Institute at CFA works to promote a safer, healthier and more affordable food supply.

Safe Tables Our Priority (“S.T.O.P.”) is a national, non-profit volunteer health organization dedicated to preventing suffering, illness and death due to foodborne illness by advocating sound public policy, increasing awareness and education, and providing victim assistance.

FDA’s acceptance of the use of carbon monoxide gas to displace oxygen in some packaging of case-ready red meat and ground meat products presents a considerable food safety concern for consumers. Carbon monoxide masks the natural coloration of meat by reacting with myoglobin in the meat and producing a bright red color. The bright red color is desirable for meat processors because consumers associate the color with freshness. The artificial coloration produced by carbon monoxide has been found to last “beyond the time of spoilage,”<sup>1</sup> thus masking the true color and freshness of meat

---

<sup>1</sup> Sorheim, Oddvin, *et al*, “The storage life of beef and pork packaged in an atmosphere with low carbon monoxide and high carbon dioxide.” *Meat Science*, Volume 52, Issue 2, June 1999, pages 157-164.

packaged with carbon monoxide. It is inherently misleading to consumers to disguise the actual freshness of the meat product.

Consumers rely heavily on color in selecting fresh meat products<sup>2</sup> and identify a bright red color with freshness and wholesomeness. Carbon monoxide also inhibits the growth of aerobic bacteria<sup>3</sup>, which provide the evidence of spoilage with which most consumers are familiar. By extending the appearance of freshness via the red coloration of the meat, the addition of carbon monoxide masks the true coloration and any evidence of spoilage or microbial contamination is not apparent. The use of carbon monoxide, therefore, hides the visual clues that consumers utilize on a regular basis to determine the safety and freshness of their meat. Without these clues, consumers are unable to determine if the meat they are purchasing for their families is truly fresh.

This inability to properly identify the freshness of meat products is a significant consumer concern and needs to be addressed by the FDA. While carbon monoxide itself may not be dangerous to health, it should not be considered “safe” when it is used to mask the fact that meat is old enough to have lost its red color. The older meat is more likely to have higher levels of both spoilage and pathogenic bacteria. All of FDA’s and USDA’s food safety education materials urge consumers to maintain meat at proper temperatures. The bright red color produced by carbon monoxide may disguise the fact that a meat product has been subjected to temperature abuse and therefore could carry a heavier load of pathogens.

Consumer Federation of America and Safe Tables Our Priority are surprised and disappointed that the FDA has advanced this action, which raises safety issues and amounts to economic adulteration. We urge the Agency to prohibit the use of carbon monoxide in the packaging of fresh meat and rescind its “no objection” stance on GRAS notifications for Pactiv Corp. and Precept Foods, Inc. as outlined in the Kalsec petition.

Thank you for your consideration of this issue.

Sincerely,

Carol Tucker Foreman  
Director, Food Policy Institute  
Consumer Federation of America

Barbara Kowalczyk  
President  
Safe Tables Our Priority

CC: Dr. Barbara Masters, Administrator, Food Safety and Inspection Service, USDA

---

<sup>2</sup> Kohls, L.I., *et al.*, “A Comparison of Five Different Modified Atmosphere Package Methods for Retail Display-Ready Ground Beef.” 2001 Animal Sciences Report, The Department of Animal Sciences, Colorado State University. (<http://ansci.colostate.edu/dp/msfs/lik011.htm>)

<sup>3</sup> Luno, M., *et al.*, “Beef shelf life in low O<sub>2</sub> and high CO<sub>2</sub> atmospheres containing different low CO concentrations.” *Meat Science*, Volume 55, Issue 4, August 2000, Pages 413-419.