

The orange essential oil known as cold processed terpenless Valencia orange oil (CPTVO) has been shown to inhibit E. coli O157:H7 at refrigeration temperatures, according to research from University of Arkansas Center for Food Safety personnel published in the [Journal of Food Science](#).

"Despite the food safety advances made in beef production, it is clear that meat products continue to become contaminated with E. coli O157:H7 and Salmonella," study researcher Lawrence Goodridge of the Colorado State University animal science department said in a news release. "Newer interventions should be developed that could be employed as additional hurdles to support the current Hazard Analysis and Critical Control systems. The verification of antimicrobials that are effective at chilling temperatures would be particularly useful, since these antimicrobials could be used to decrease the concentrations of E. coli O157 and Salmonella on beef carcasses immediately before fabrication."

Until recently there had been no antimicrobial agents exclusively designed to reduce foodborne pathogenic bacteria during storage or fabrication at low temperatures.

But last year, the researchers studied the effects of CPTVO on E. coli O157:H7 and Salmonella on beef at 4 degrees Celsius. They concluded that the oil may be used as an intervention against the pathogens at that temperature.