

Effect of active packaging on the oxidative  
and microbial stability of beef aged for  
different times and stored in modified  
atmosphere

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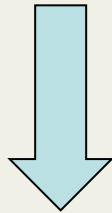
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# DEVELOPMENT OF ACTIVE PACKAGING

## ACTIVE PACKAGING

Incorporated antioxidant agents in packaging material



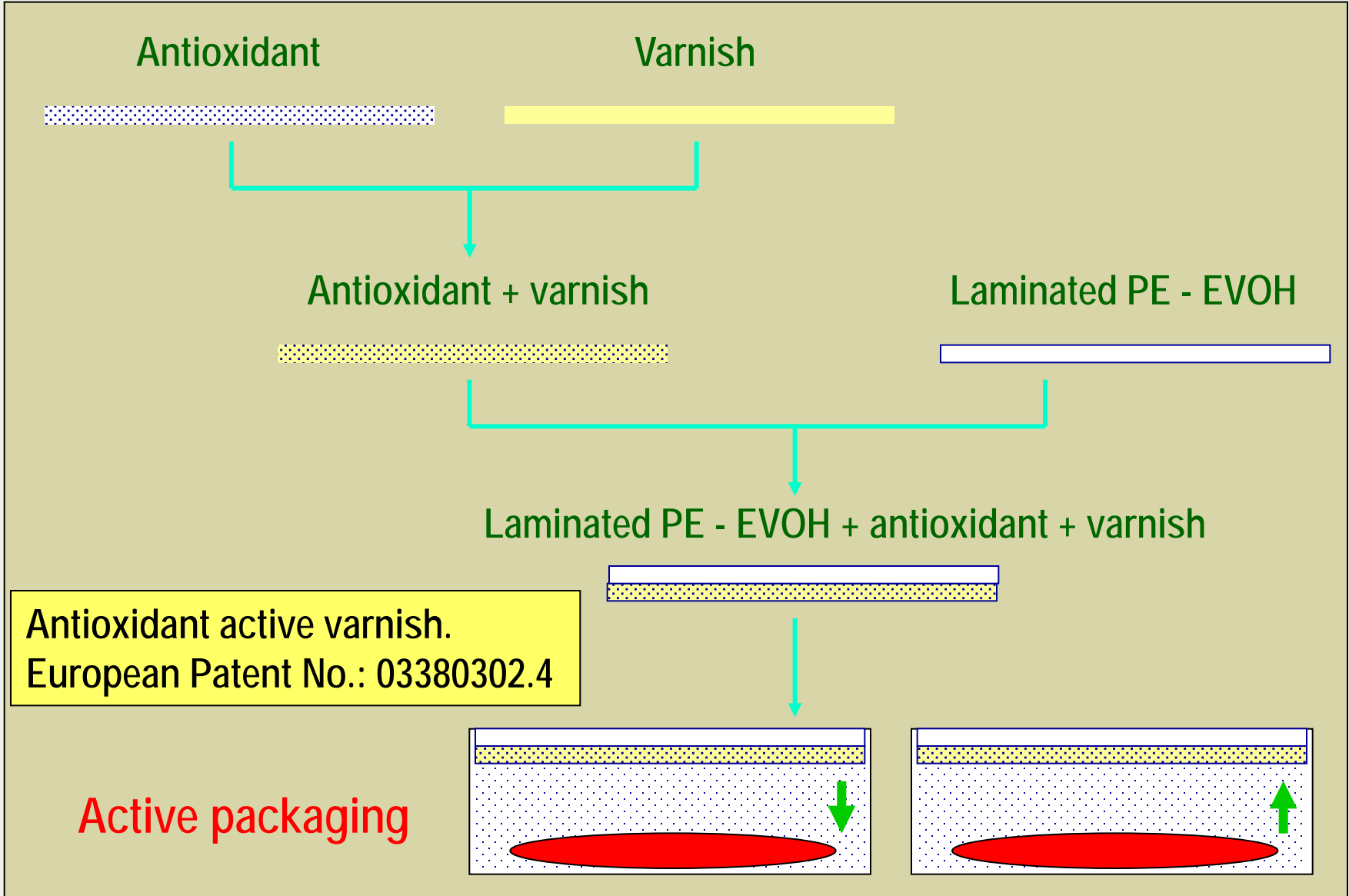
Antimicrobial



Antioxidant

Avoid direct addition on food  
Action based on food packaging interaction

# Active packaging design



# Beef carcasses (48 h postmortem)

**3 *Longissimus dorsi* were obtained**

**Vacuum packaging**



01 *L. dorsi*:aged for 0 days  
01 *L. dorsi*:aged for 7 days  
01 *L. dorsi*:aged for 14 days

**First group packaged  
without extract**

**Second group packaged with  
an active film (4% origano)**

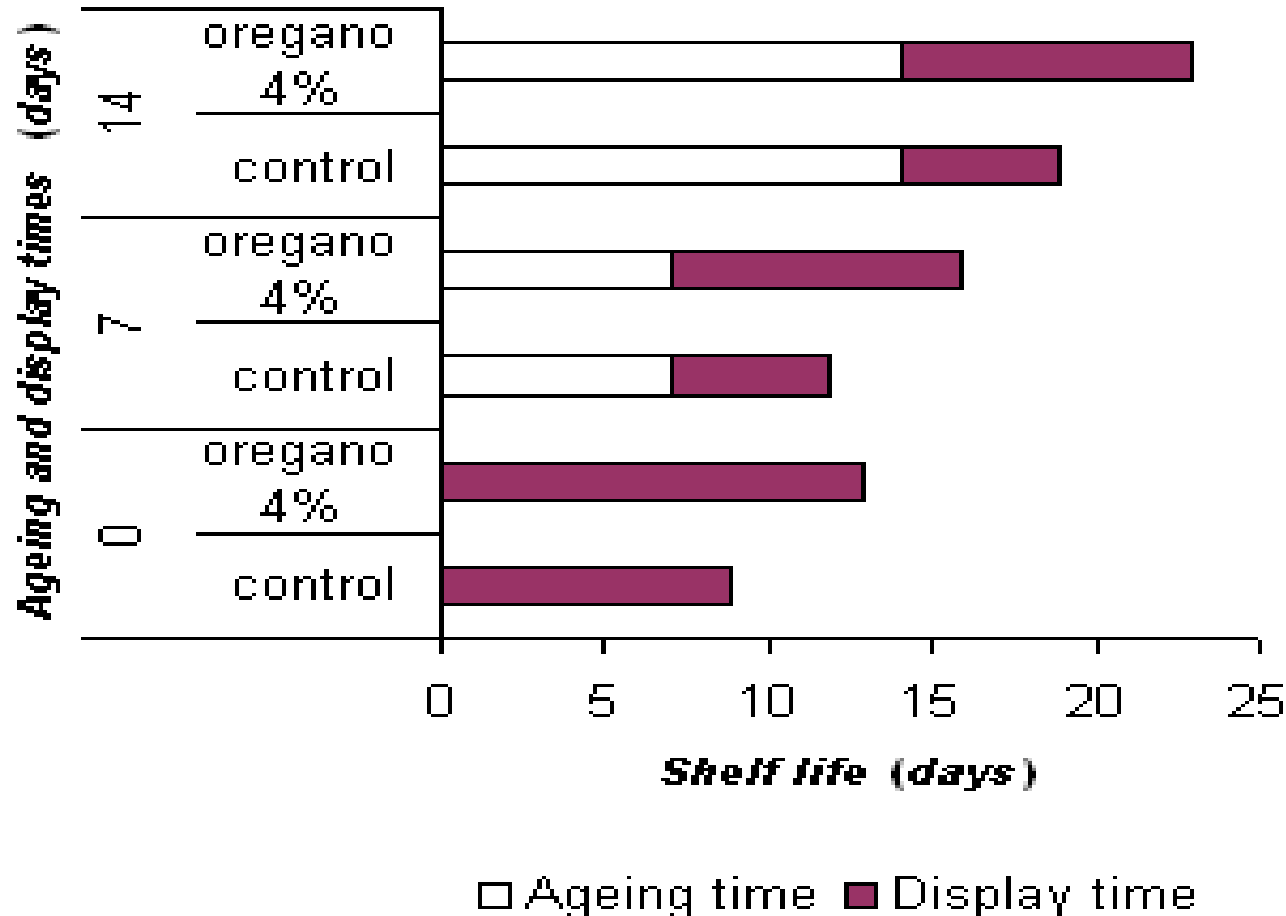


Steaks into polystyrene tray



Trays filled with gas mixture

# Effect of active packaging on the shelf life extension of beef stored in modified atmospheres at different ageing time



# Conclusion

- Packaging with an oregano active film resulted in enhanced oxidative stability and effectively delayed count of aerobic psychrotrophic flora
- The shelf life of beef was extended at least for 3 days

Thank you for attention  
Further information

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