

# Extending the shelf life of fresh ready-to-cook chicken meals by lingonberry marination and low oxygen packaging

Oddvin Sørheim, Aud Espedal, Karin Solgaard  
and Martin Høy

Nofima Mat AS, Ås, Norway

ICoMST, Copenhagen, 19 August 2009

# Ready-to-cook chicken meal

## High quality ingredients:

- raw, marinated chicken breast
- raw broccoli, cauliflower & carrots
- precooked rice
- pasteurised red pepper sauce
- (black pepper)



Microperforated PE top film & one-compartment PP tray

Direct microwave oven heating, steam valve, 8 minutes at 700 W

**Aim: extending microbiological shelf life from 5 to 10 days**

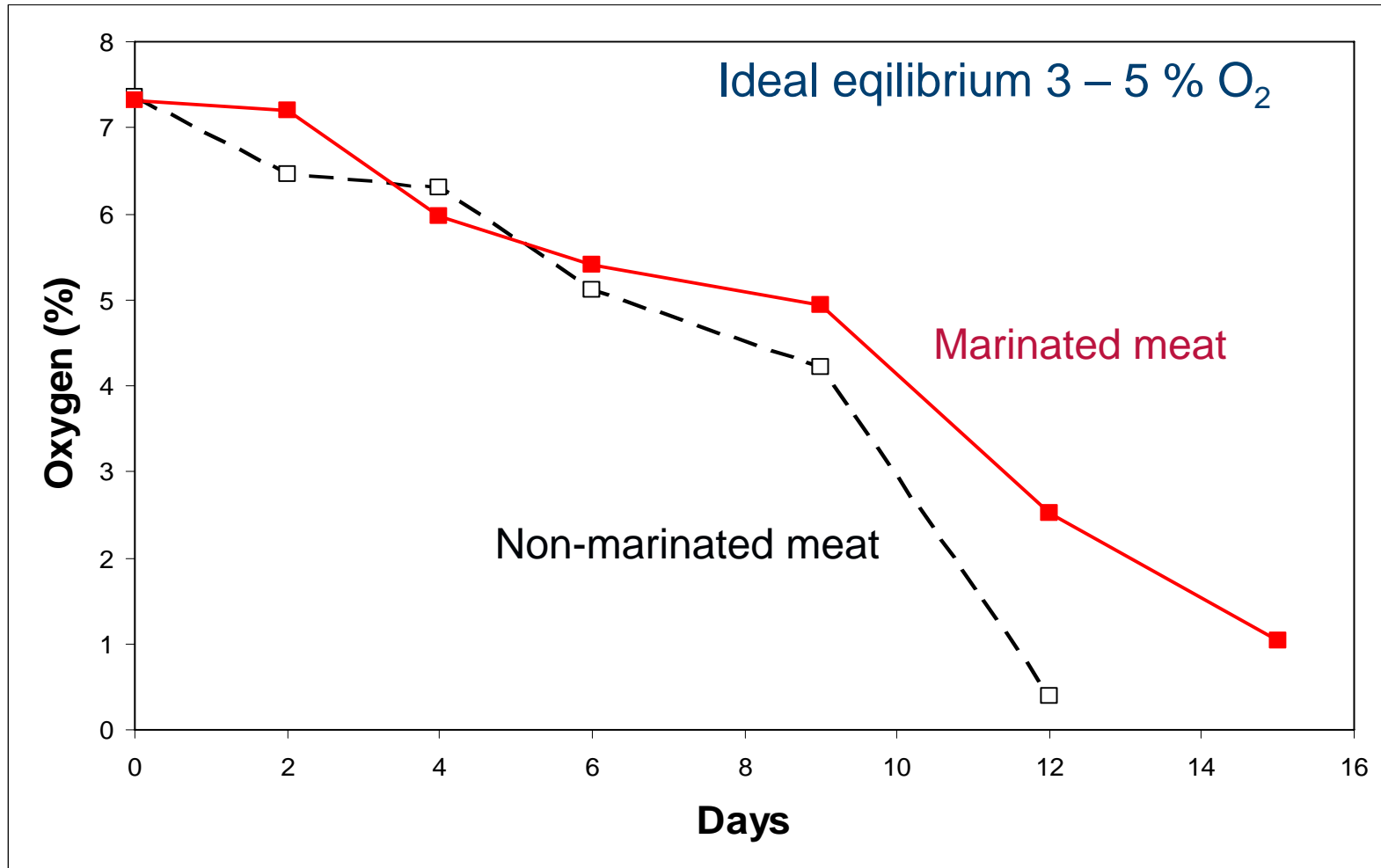
# Marination of chicken meat in lingonberry juice

- Unsweetened juice of lingonberry or *Vaccinium vitis-idaea*
- Immersion in 100 % juice for 10 minutes
- Surface treatment 1 – 2 mm deep
- < 1 % juice uptake
- Juice pH of 2.8
- Benzoic acid ca. 0.7 g/l juice
- Slight odour and taste of lingonberry

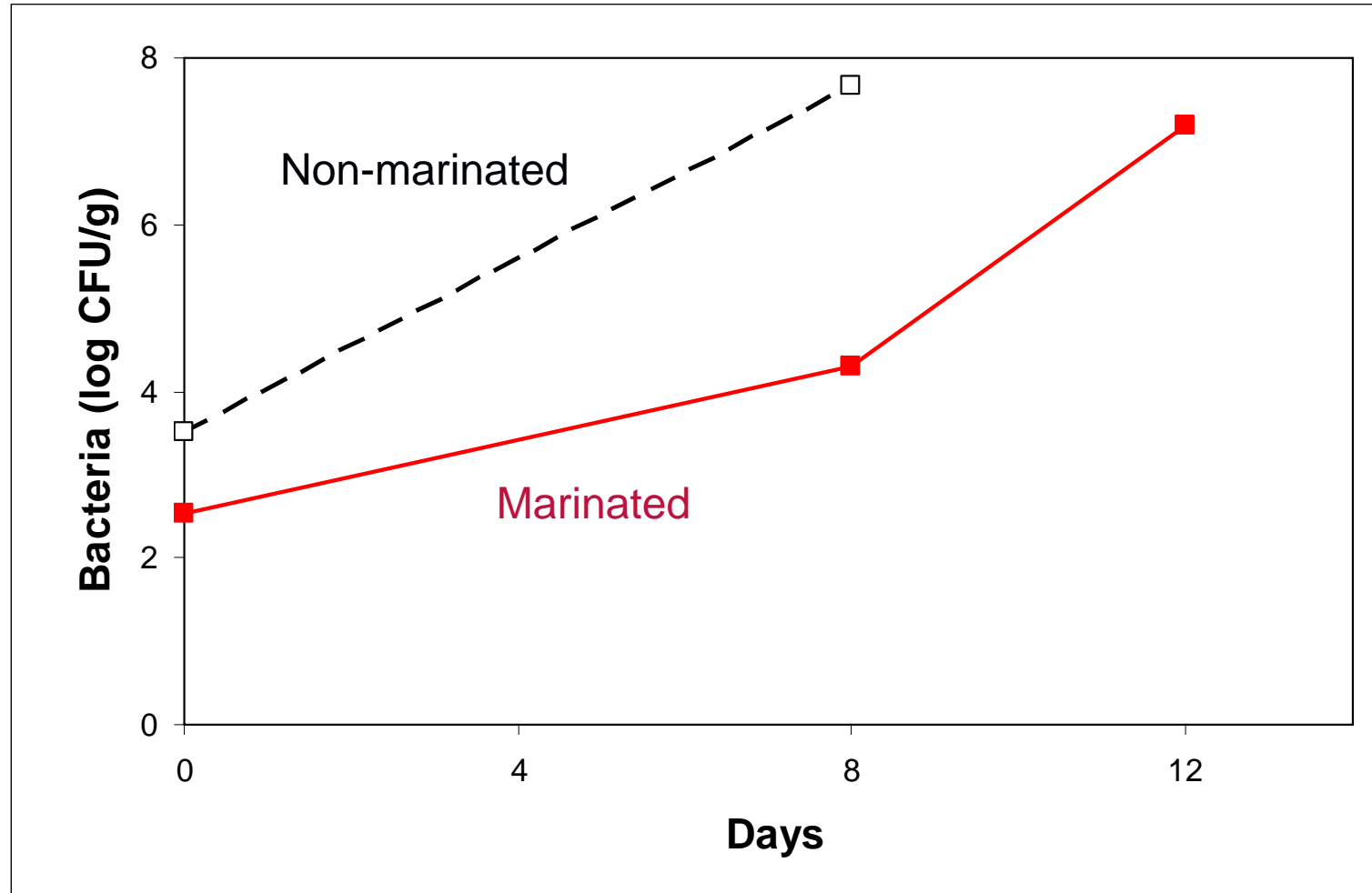


# Oxygen (%) in headspace of full meal packages

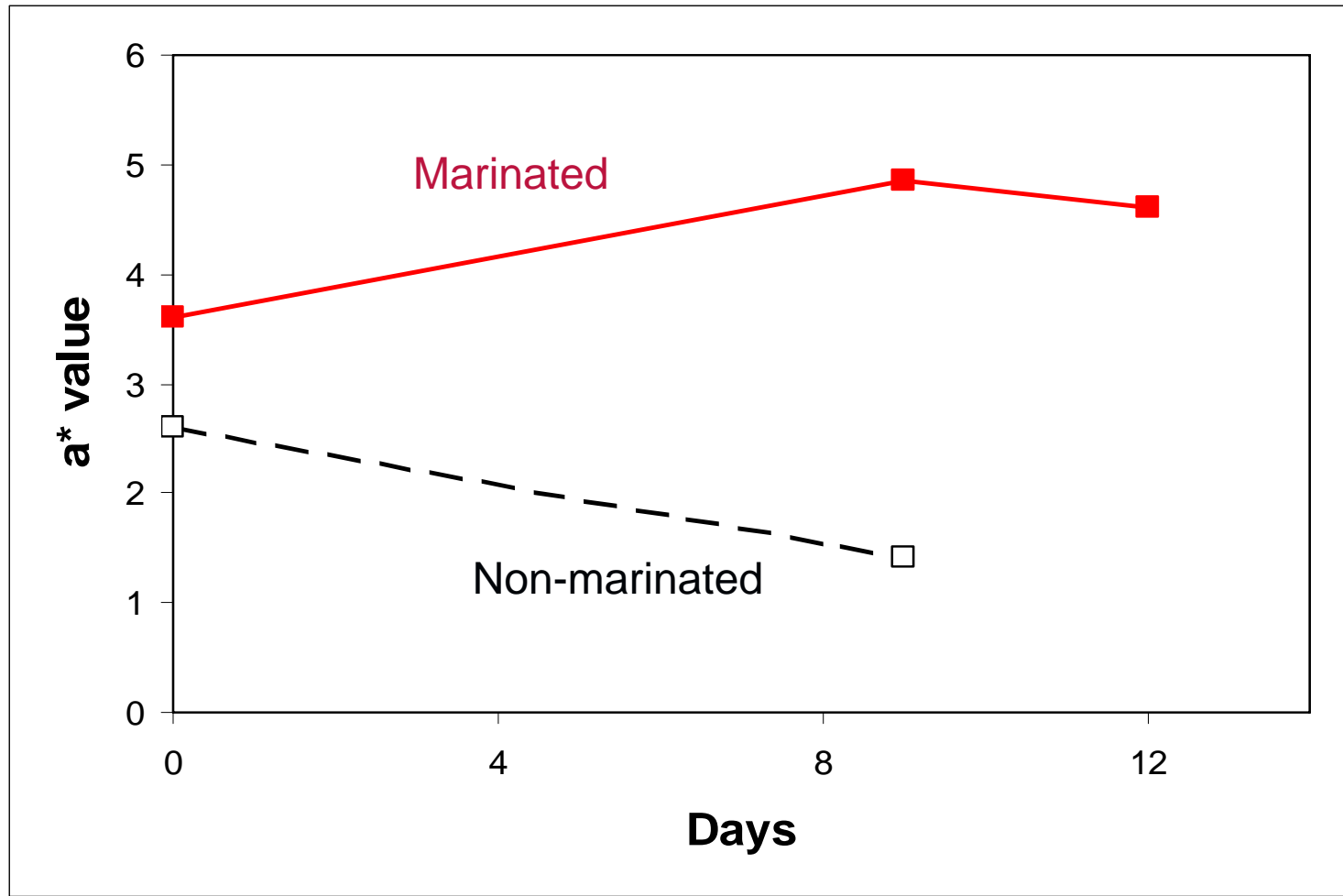
Initial gas flush 5 % O<sub>2</sub>/ 5 % CO<sub>2</sub>/ 90 % N<sub>2</sub>



# Total plate counts (PCA) of chicken meat at 4 °C



# a\* redness values of chicken meat surface



# Summary

**Double Fresh**  
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- **Microbiological shelf life of 12 days at 4 °C** for marinated chicken meals vs. 7 days for non-marinated, by total counts and off-odour
- Marinated meat more red both as raw & cooked, preferably add spices and herbs on surface
- Marination increased meat drip loss from 2.4 to 5.8 %
- Also developed a salmon meal with 12 days shelf life
- Appealing, tasty & healthy ready-to-cook meals

Funding by the EU project Double Fresh FR6 STREP PL 023182  
[www.doublefresh.eu](http://www.doublefresh.eu)