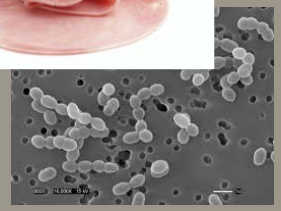
EVOLUTION OF SLICED COOKED HAM MICROBIOTA PACKAGED IN MAP



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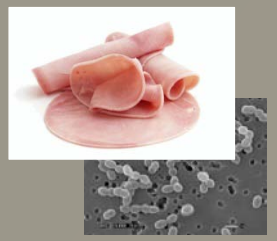
EVOLUTION OF SLICED COOKED HAM MICROBIOTA PACKAGED IN MAP

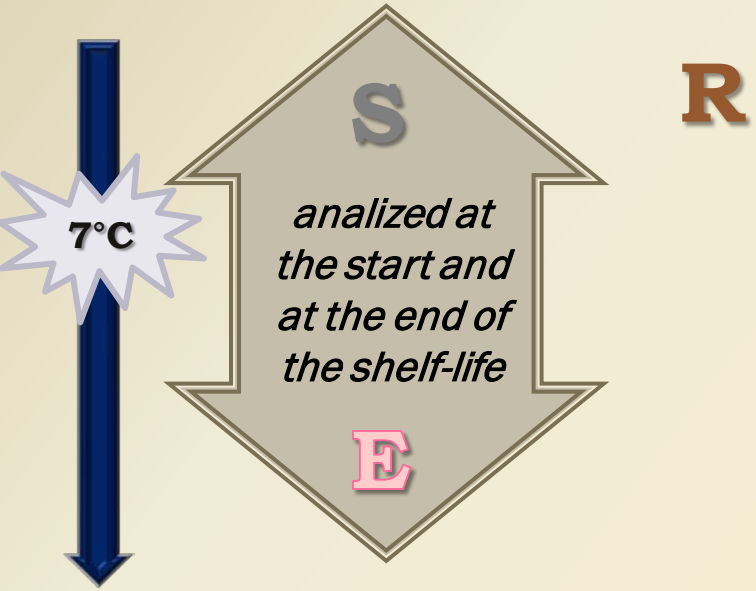


Aims of the study

19 lots

14 lots delivered at packaging

5 lots spoiled or rejected

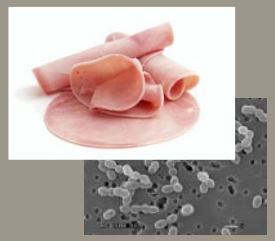


Experimental design

1. Enumeration and characterization of bacteria grown on MRS (RAPD-PCR and amplification of 16s sequences)

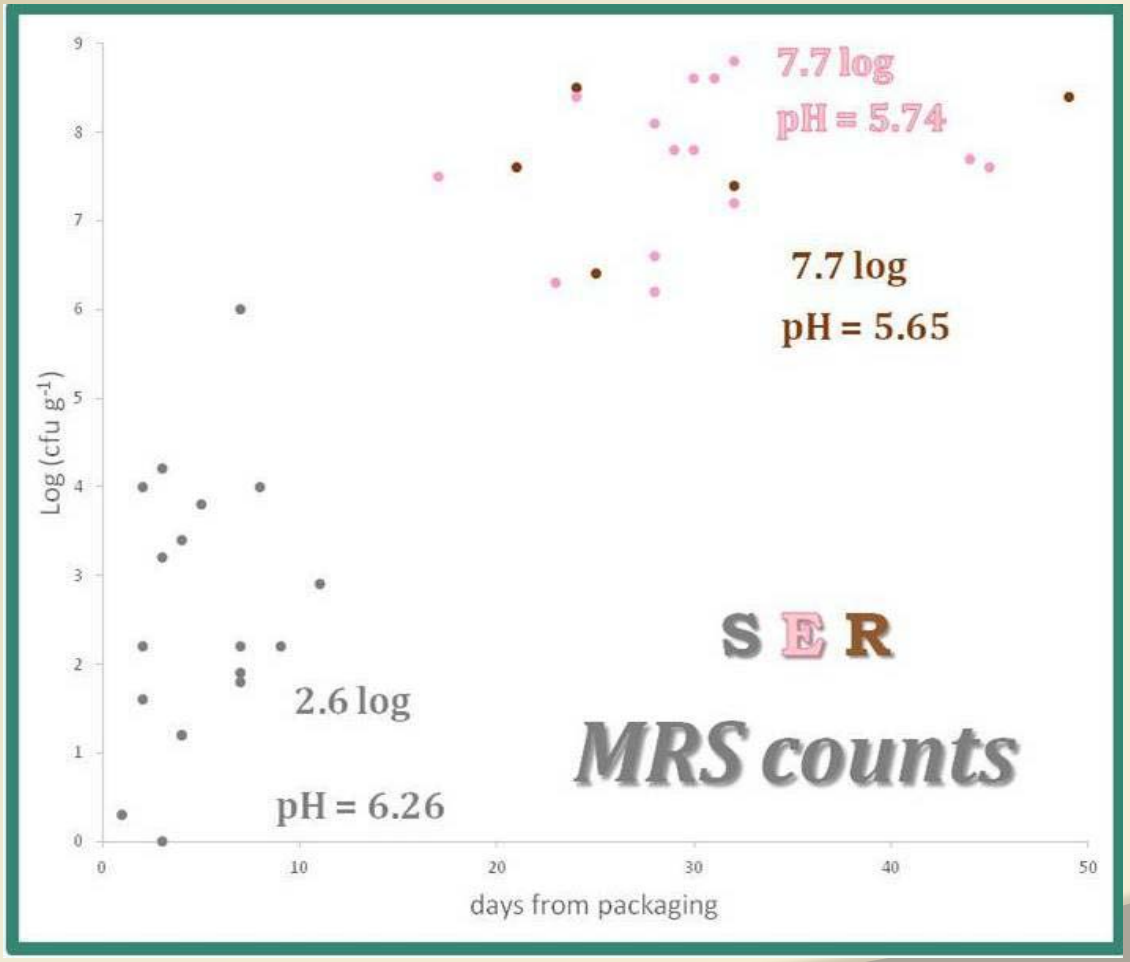
2. Metataxonomic analysis of bacterial population

EVOLUTION OF SLICED COOKED HAM MICROBIOTA PACKAGED IN MAP



RESULTS

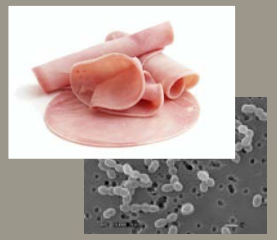
MRS ENUMERATION



Interestingly, rejected samples and good ones analyzed at the end of the shelf-life were similar in terms of bacterial charge and sensorial properties.

EVOLUTION OF SLICED COOKED HAM MICROBIOTA PACKAGED IN MAP

RAPD-PCR CLUSTERING OF MRS ISOLATES



19 species (17 in S samples and 9 in E samples)

7 genera

- *Carnobacterium*
- *Enterococcus*
- *Lactobacillus*
- *Leuconostoc*
- *Staphylococcus*
- *Streptococcus*
- *Weissella*

- *Weissella viridescens*
- *Streptococcus oralis*
- *Streptococcus infantis*
- *Streptococcus australis*
- *Staphylococcus hominis*
- *Staphylococcus epidermidis*
- *Leuconostoc rapi*
- *Leuconostoc mesenteroides*
- *Leuconostoc carnosum*
- *Lactobacillus sakei*
- *Lactobacillus fuchuensis*
- *Lactobacillus curvatus*
- *Enterococcus raffinosus*
- *Enterococcus pseudoavium*
- *Enterococcus gilvus*
- *Enterococcus faecium*
- *Enterococcus faecalis*
- *Carnobacterium sp.*
- *Carnobacterium maltaromaticum*

Most common isolates: L.sakei (31/89 biotypes 45%) and L.carnosum (14/89 biotypes - 30%)

Other species belonging to the genera on the left accounted for less than 6%.

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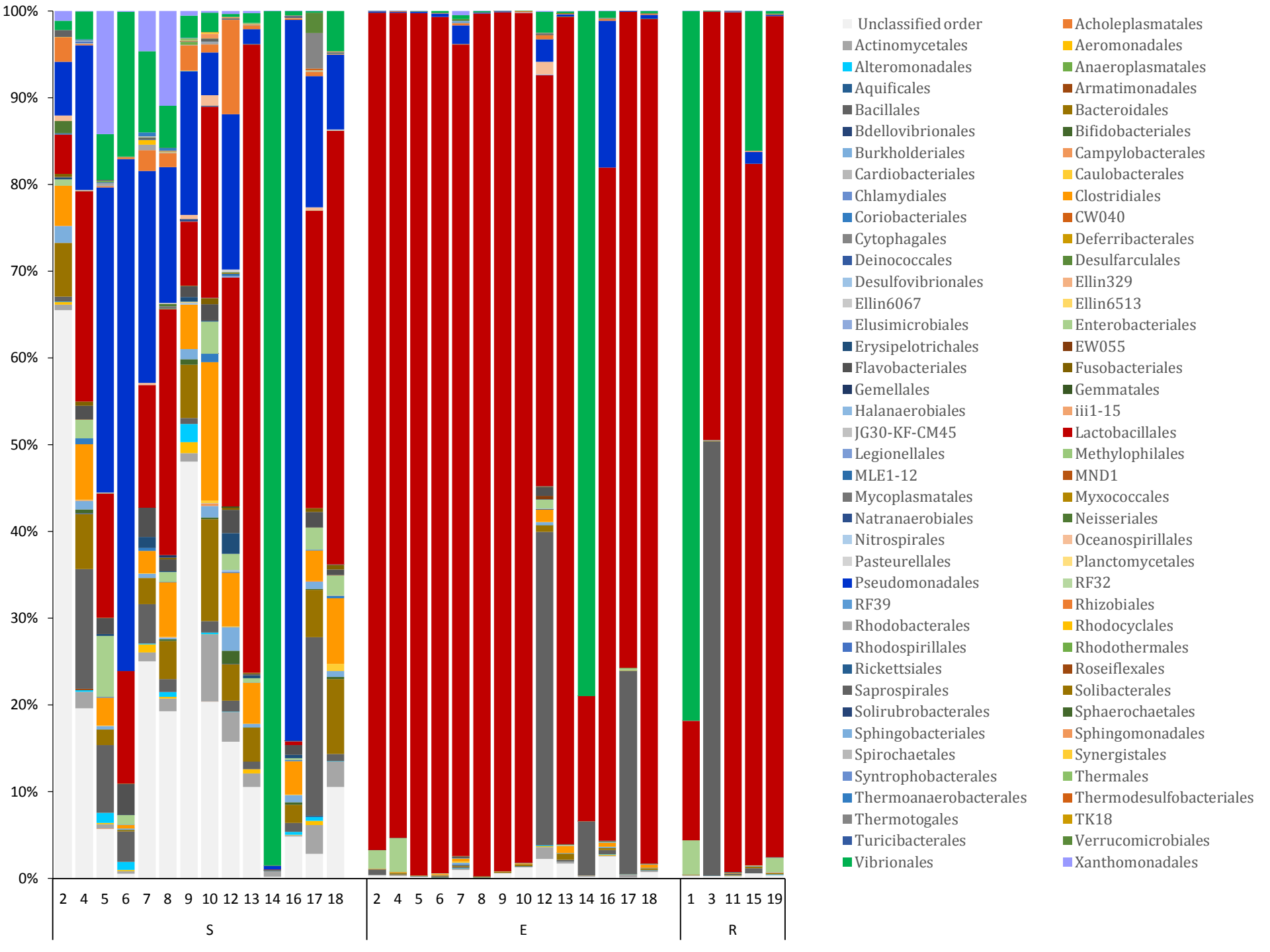
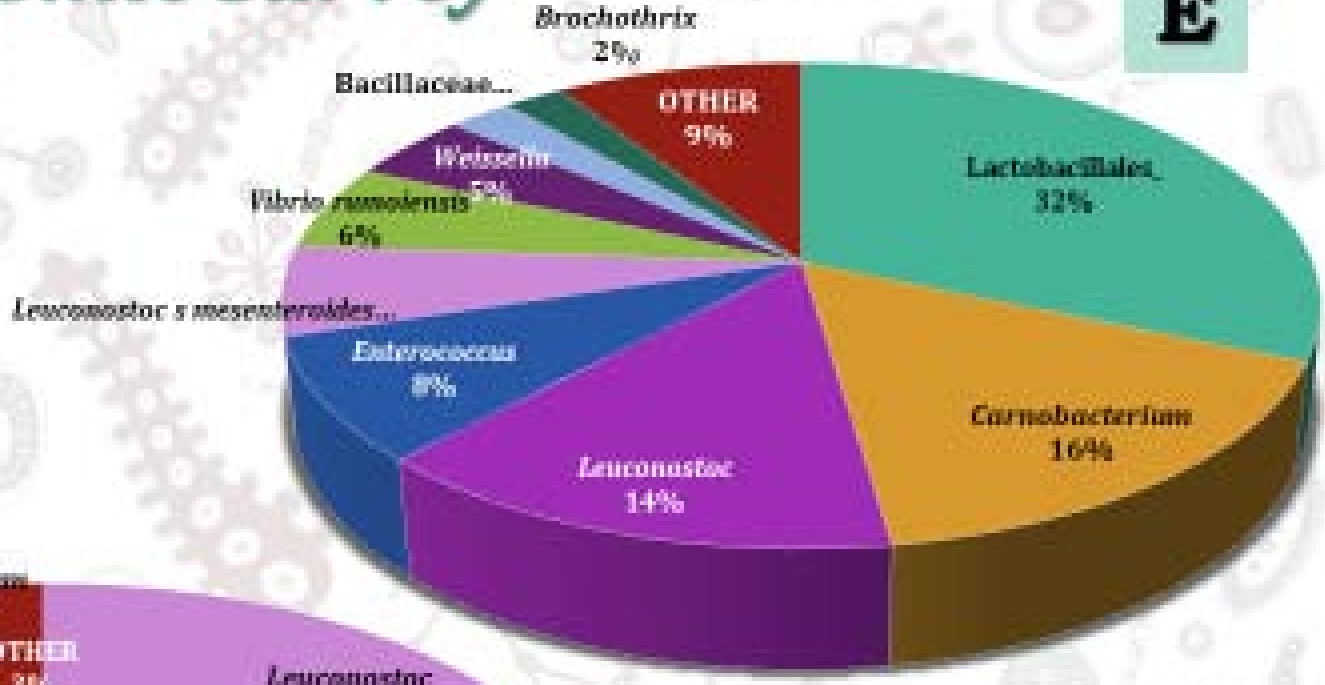

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2 4 5 6 7 8 9 10 12 13 14 16 17 18
S
2 4 5 6 7 8 9 10 12 13 14 16 17 18
E
1 3 11 15 19
R
Unclassified order
Acholeplasmatales
Actinomycetales
Aeromonadales
Alteromonadales
Anaeroplasmatales
Aquificales
Armatimonadales
Bacillales
Bacteroidales
Bdellovibrionales
Bifidobacteriales
Burkholderiales
Campylobacterales
Cardiobacteriales
Caulobacterales
Chlamydiales
Clostridiales
Coriobacteriales
CW040
Cytophagales
Deferribacterales
Deinococcales
Desulfarculales
Desulfovibrionales
Ellin329
Ellin6067
Ellin6513
Elusimicrobiales
Enterobacteriales
Erysipelotrichales
EW055
Flavobacteriales
Fusobacteriales
Gemellales
Gemmatales
Halanaerobiales
iii1-15
JG30-KF-CM45
Lactobacillales
Legionellales
Methylophilales
MLE1-12
MND1
Mycoplasmatales
Myxococcales
Natranaerobiales
Neisseriales
Nitrospirales
Oceanospirillales
Pasteurellales
Planctomycetales
Pseudomonadales
RF32
RF39
Rhizobiales
Rhodobacterales
Rhodocyclales
Rhodospirillales
Rhodothermales
Rickettsiales
Roseiflexales
Saprospirales
Solibacterales
Solirubrobacterales
Sphaerochaetales
Sphingobacteriales
Sphingomonadales
Spirochaetales
Synergistales
Syntrophobacterales
Thermales
Thermoanaerobacterales
Thermodesulfobacteriales
Thermotogales
TK18
Turicibacterales
Verrucomicrobiales
Vibrionales
Xanthomonadales

metataxonomic survey

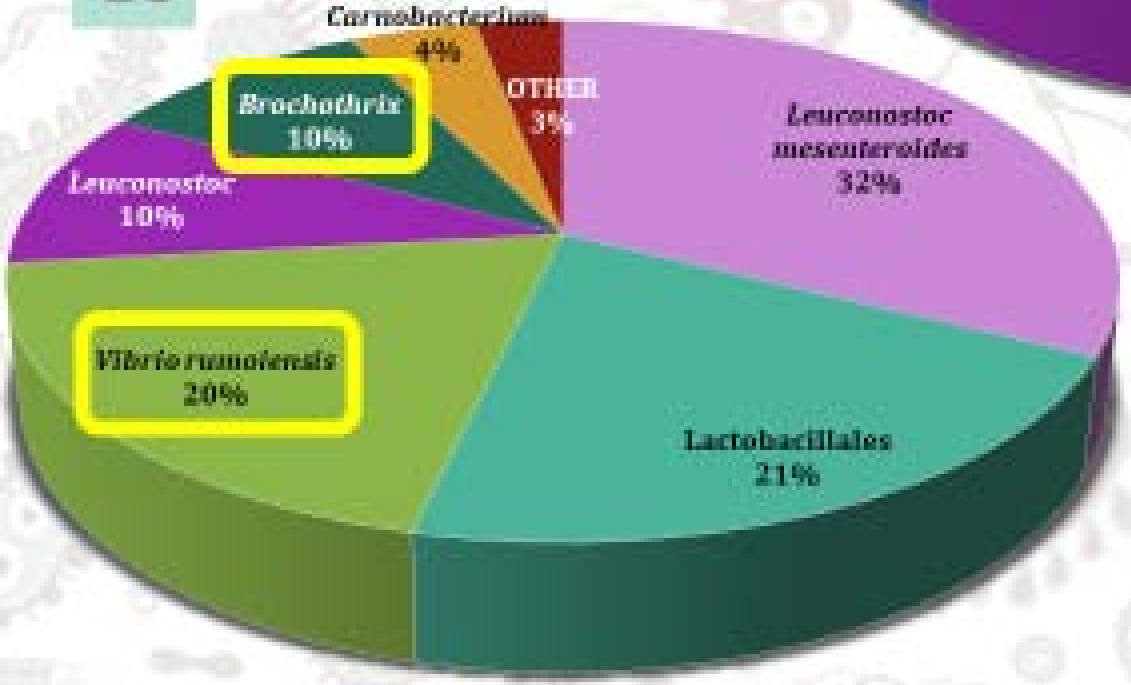
N=14

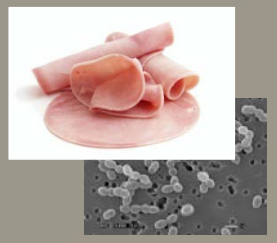
E



N=5

R





Thanks for your attention

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