**Introduction**

*L. monocytogenes* is a pathogen found within the food-processing industries, mainly brought by human, and was responsible of 1,381 confirmed cases of foodborne listeriosis for 2008 in Europe. *Salmonella* was in 2008, the second most often reported zoonotic disease in humans, and 131,468 confirmed cases of human salmonellosis were reported in Europe. Some of these cases are related to meat products consumption, as pork meat. Products can be contaminated at the slaughterhouse or during the manufacturing/packaging process. Furthermore, the number of these microorganisms can increase in function of the storage conditions.

**Objectives**

The aim of the present work was to analyse the effect of packaging (modified atmosphere or not modified air) and of the initial meat flora (irradiated meat or non irradiated) on the growth of *L. monocytogenes* and *Salmonella* spp. in pork meat.

**Materials and methods**

- **Food matrix (artificially contaminated)**: pork minced meat
- **Bacteria**
  - *L. monocytogenes*:
    - Strains mix: *L. monocytogenes* NTCT 11994
    - *L. monocytogenes* DETRY 952
    - *L. monocytogenes* CP 08/03123/02
  - Level of contamination: 100 cfu.g⁻¹
  - Incubation: 5, 8 and 10°C, 10 to 14 days
- *Salmonella* spp.:
  - Strains mix: *Salmonella Typhimurium* ATCC 14028
  - *Salmonella Typhimurium* DETRY 942
  - *Salmonella brandenburg* CP 08/03993/03
  - Level of contamination: 100 cfu.g⁻¹
  - Incubation: 8, 10 and 12°C, 10 to 14 days
- **Packaging**
  - Expanded polystyrene tray
  - Stretch film (EPS)
  - Modified atmosphere (MAP): 70% O₂/30% CO₂

**Results**

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<thead>
<tr>
<th>L. monocytogenes</th>
<th>Salmonella spp.</th>
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<td>EPS - Irradiated</td>
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<td>MAP - Irradiated</td>
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**Conclusions**

Results indicated that growth observations were similar for both pathogens depending on incubation temperature. All growth indicators for both pathogens were higher on the irradiated meat, meaning the initial flora inhibited their growth, by producing inhibitors and/or by competition for substrates. As expected, MAP packaging was more restrictive for growth of pathogens and for the initial flora.