

A decorative header consisting of a dark grey bar on the left containing the text 'TITLE' and 'LITTE', followed by seven colored rectangular blocks: blue, grey, gold, teal, lime green, red, and cyan.

TITLE

LITTE

Modelling the growth of *Listeria monocytogenes* in Cooked Tuna

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University of Mauritius

BACKGROUND

BACKGROUND



Listeria monocytogenes



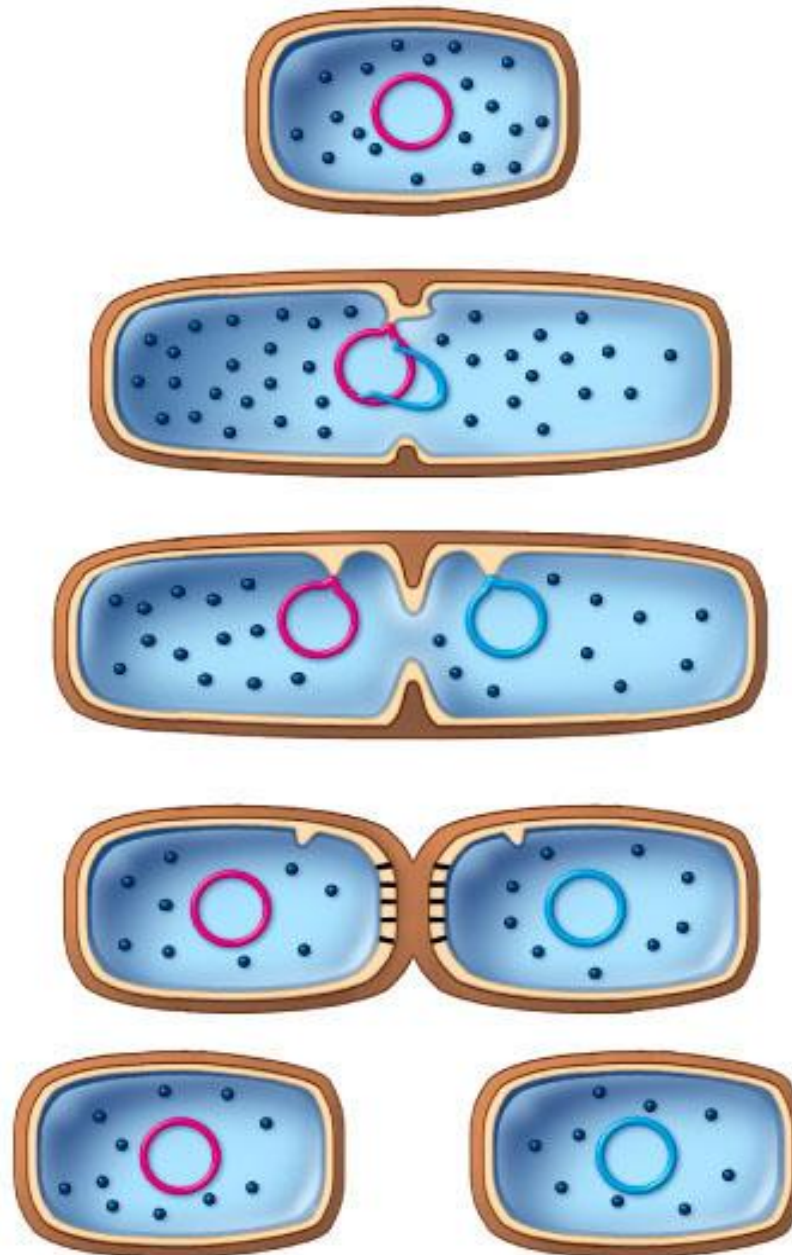
- Foodborne pathogen
- Grows at refrigeration temperatures
- Potentially hazardous food/Time-temperature control for food safety
- Food Safety objective < 100 cells/g

BACKGROUND

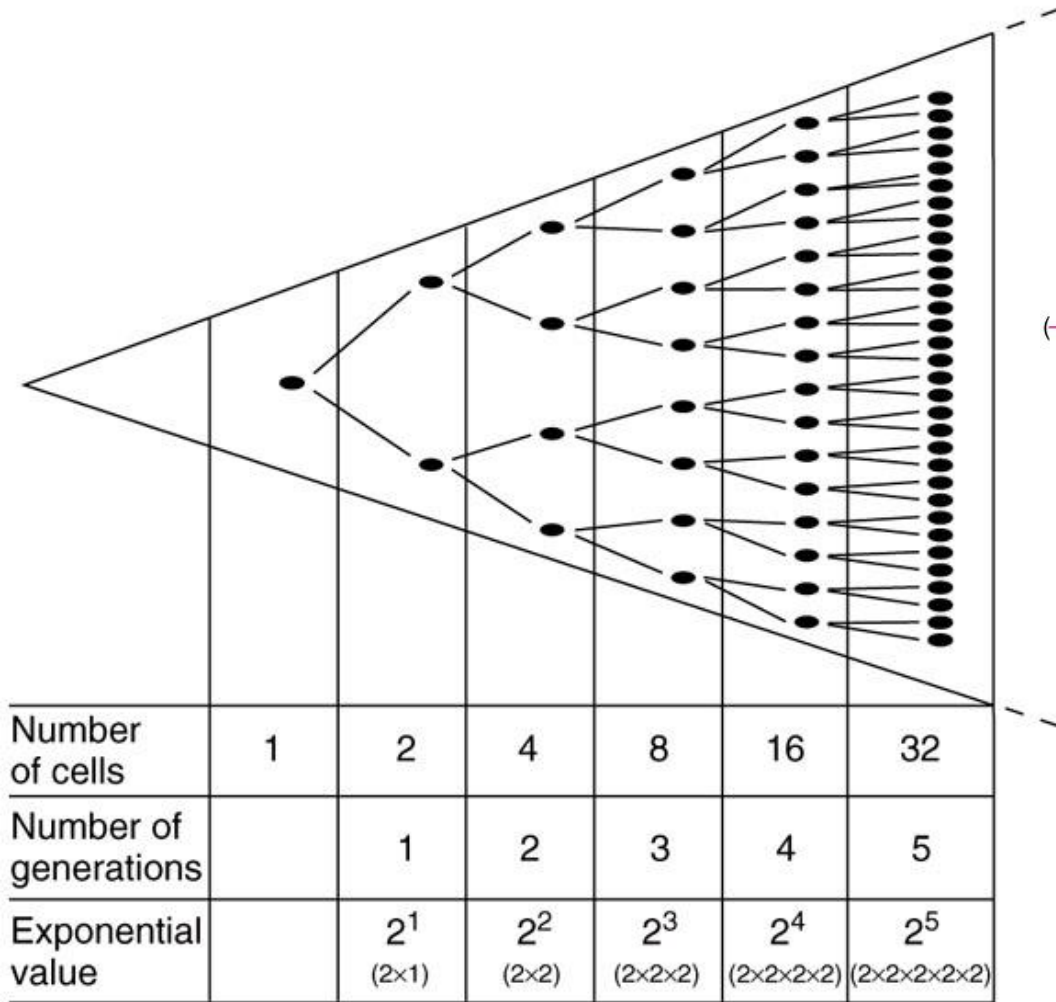
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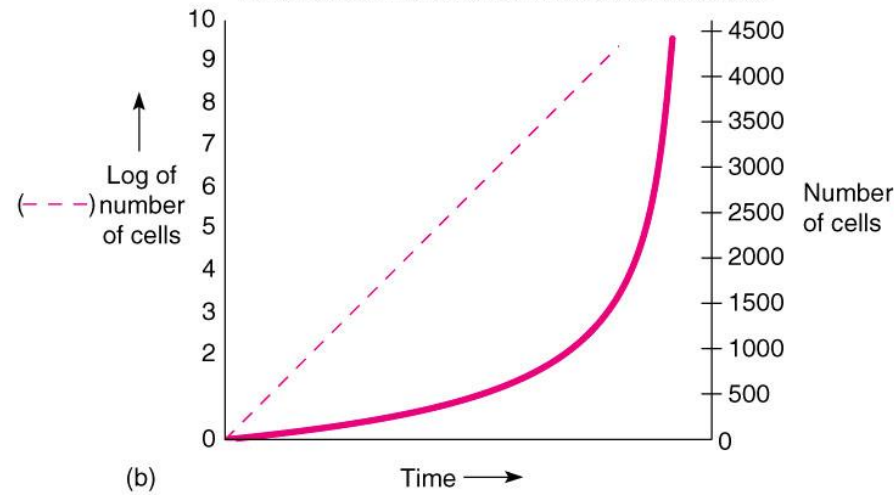
Predictive Microbiology



- Cell wall
- Cell membrane
- Chromosome 1
- Chromosome 2
- Ribosomes

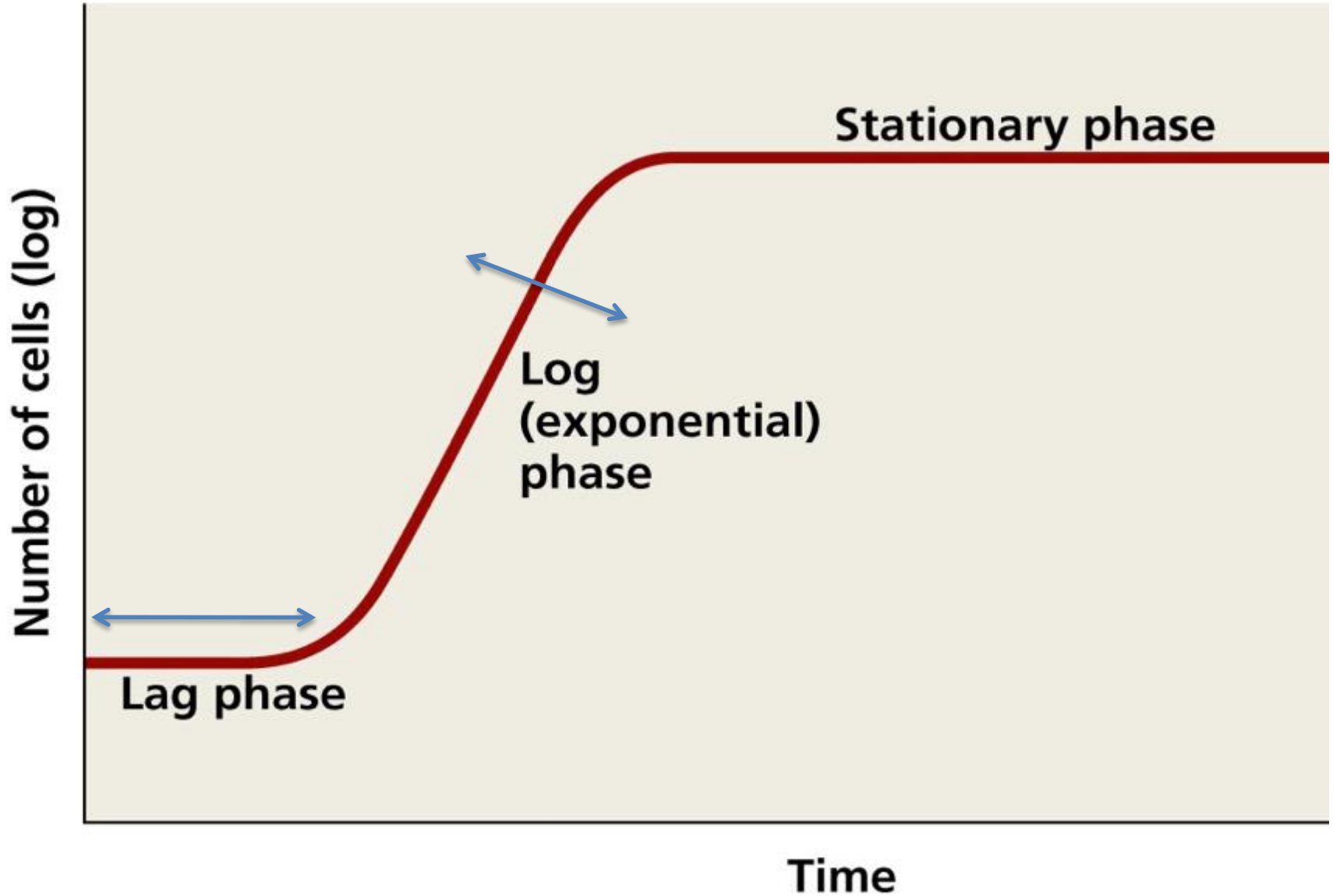


(a)

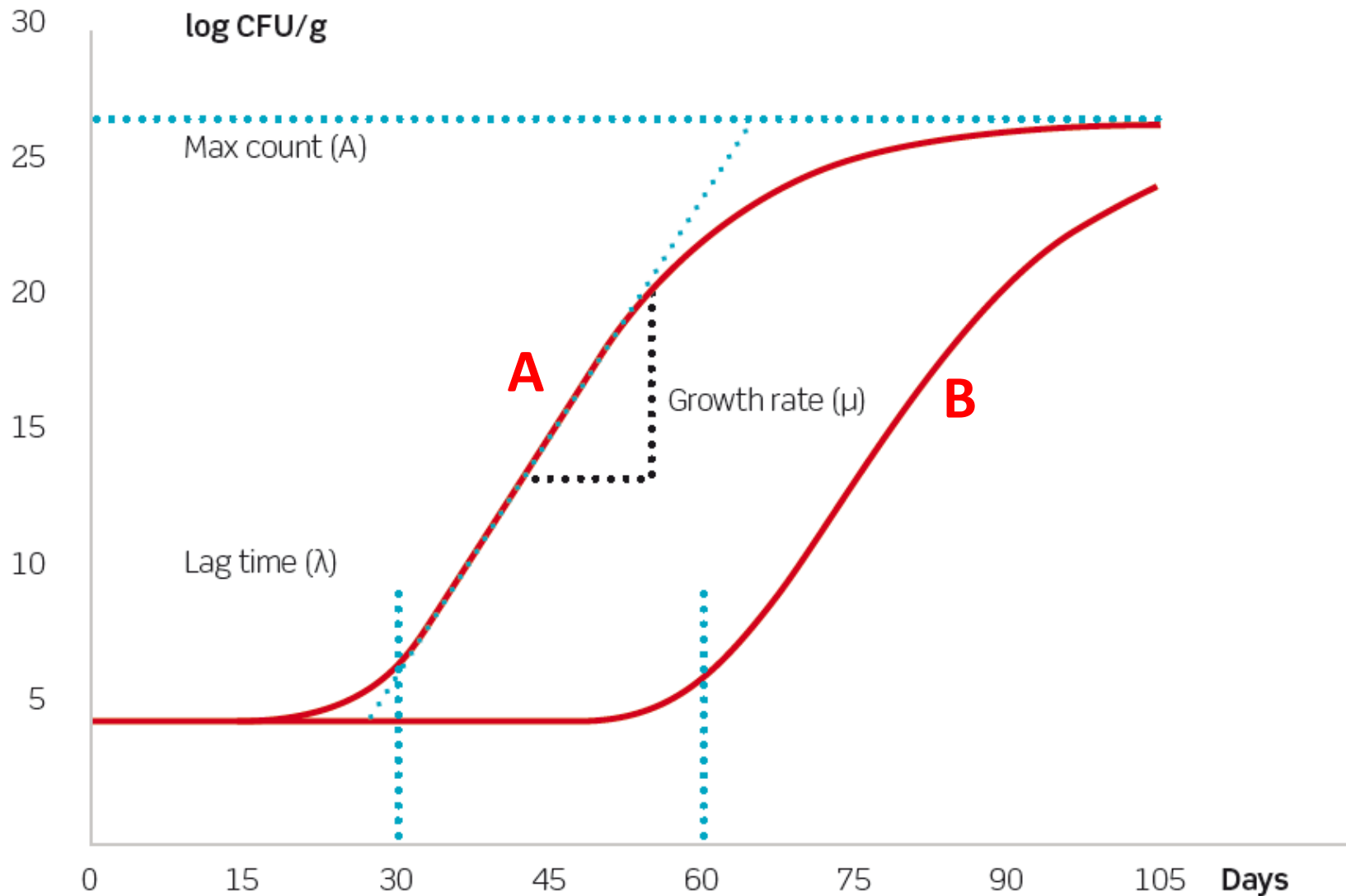


(b)

Bacterial Growth Curve



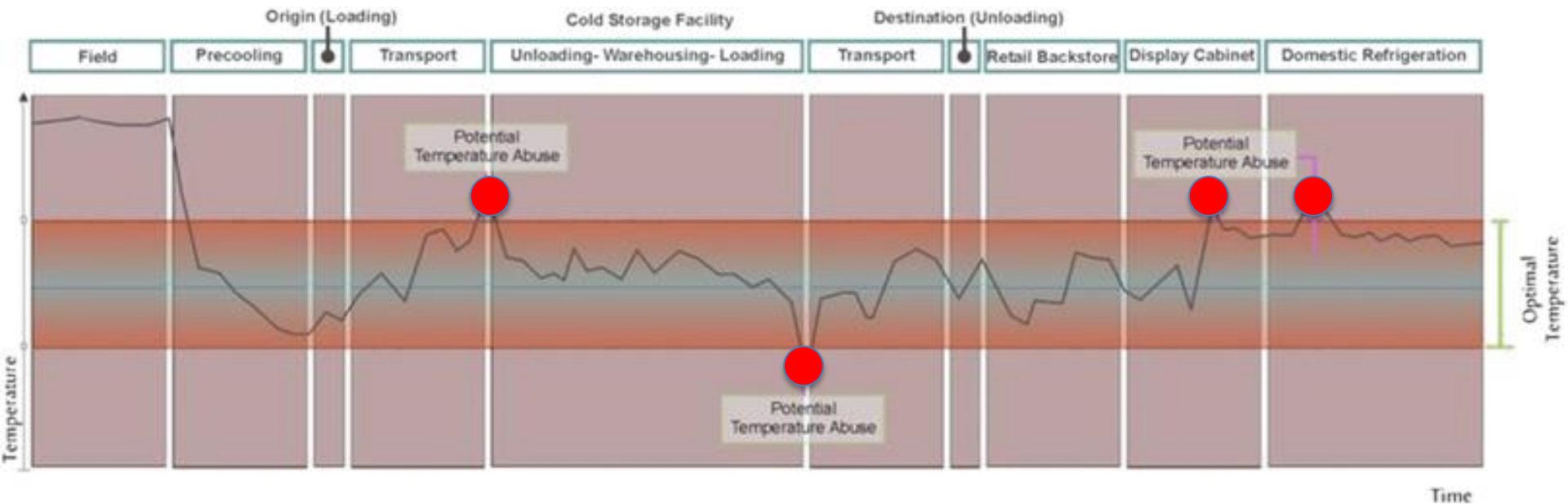
Effect of temperature



OBJECTIVE

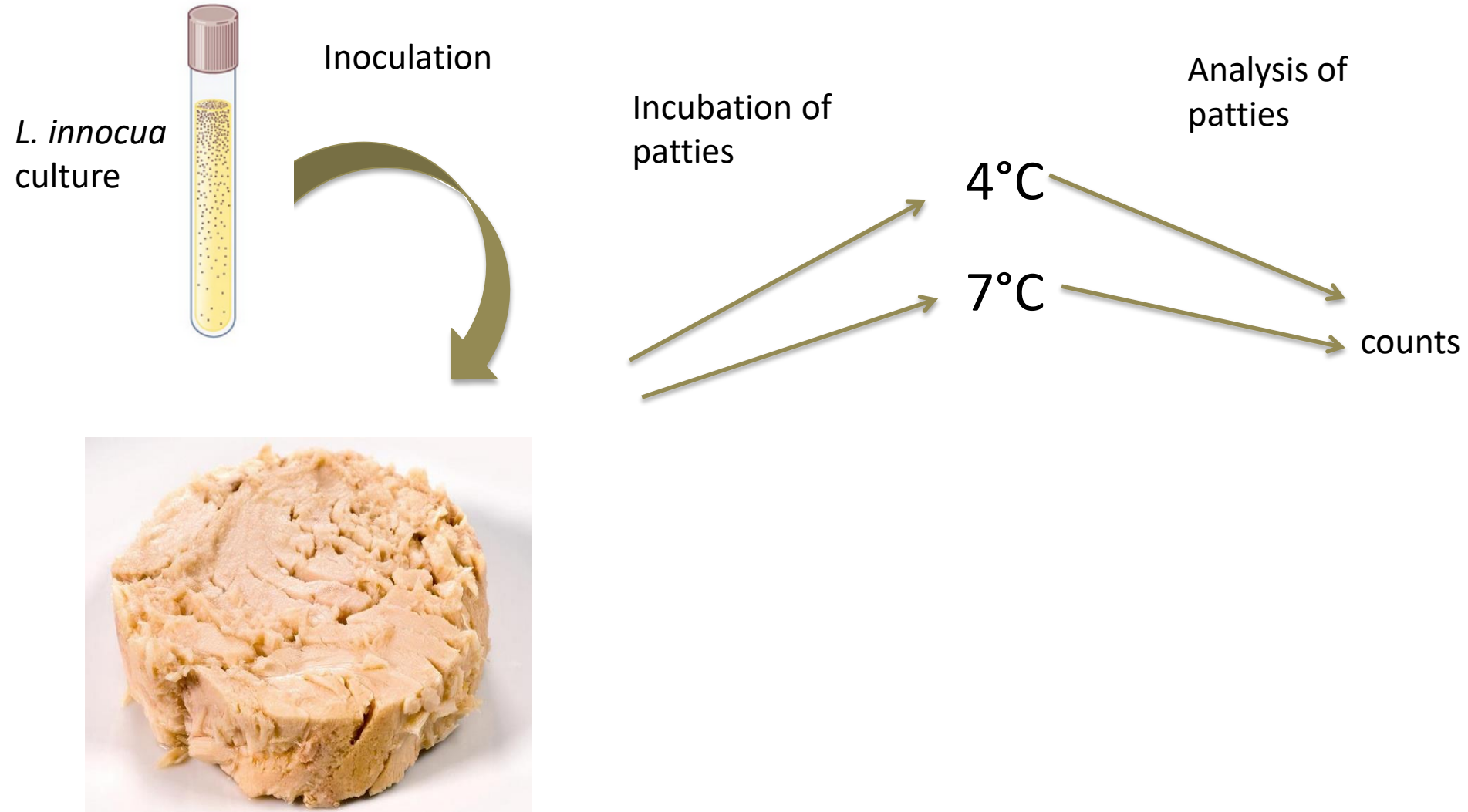
OBJECTIVE

Typical temperature profile of perishable food



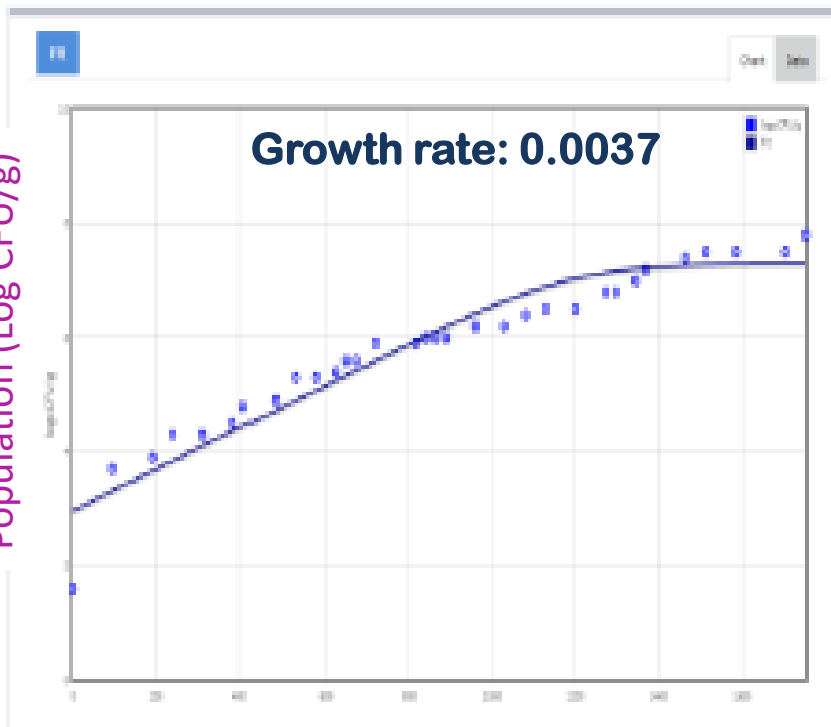
**To use mathematical models
to predict the growth of
L. monocytogenes in
cooked tuna meat
under **isothermal** and **fluctuating**
temperature conditions**

Data generation



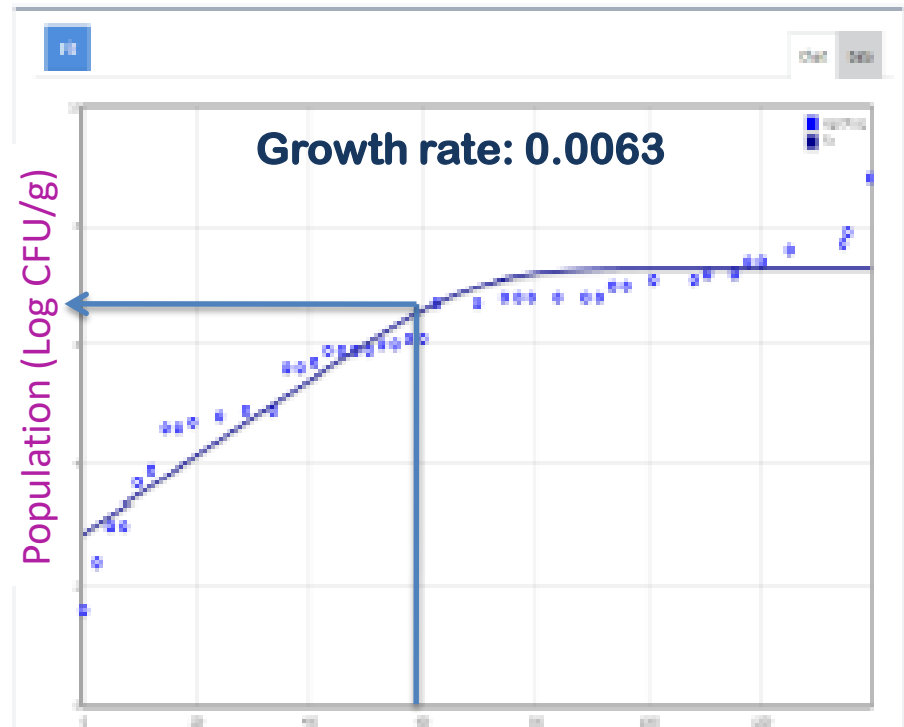
Modelling under isothermal conditions

4°C



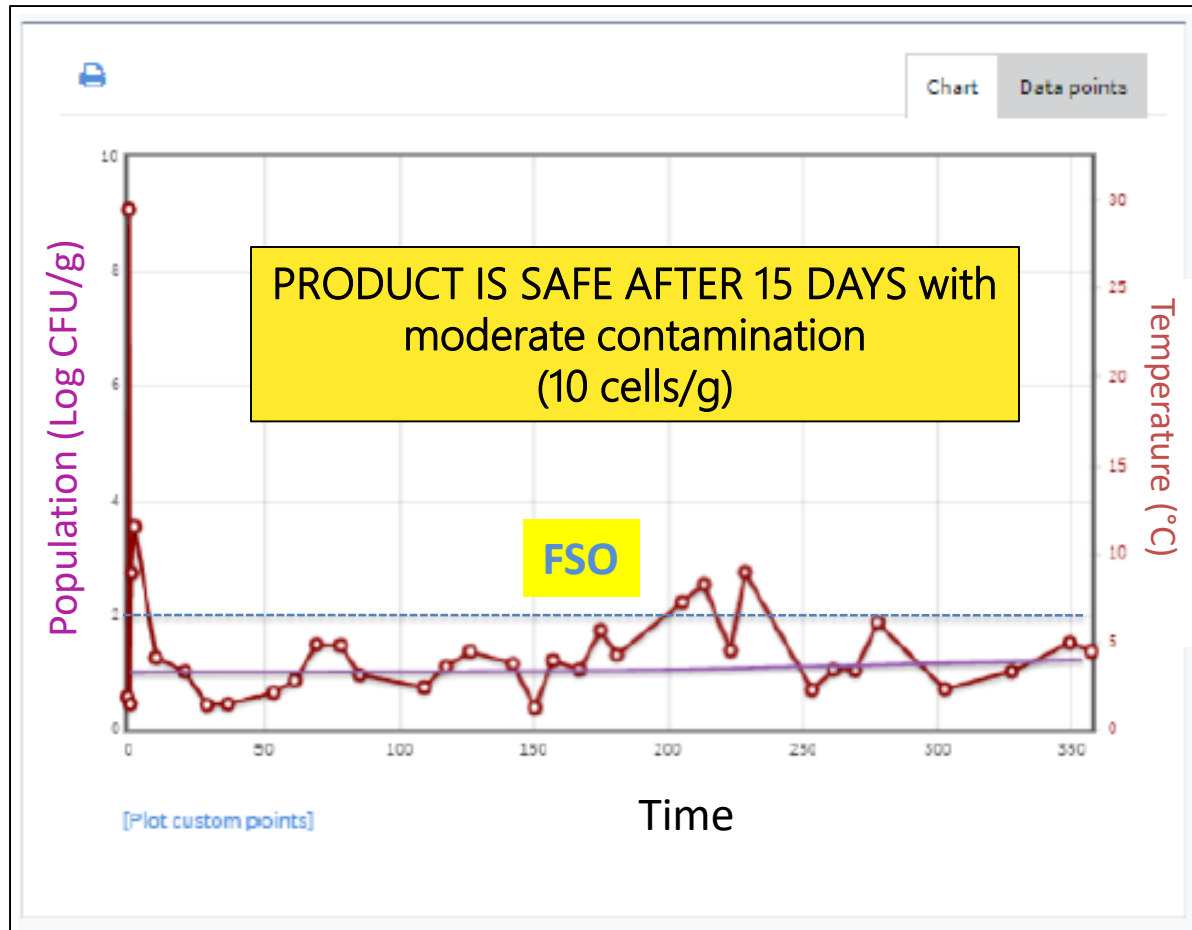
Time (hours)

7°C

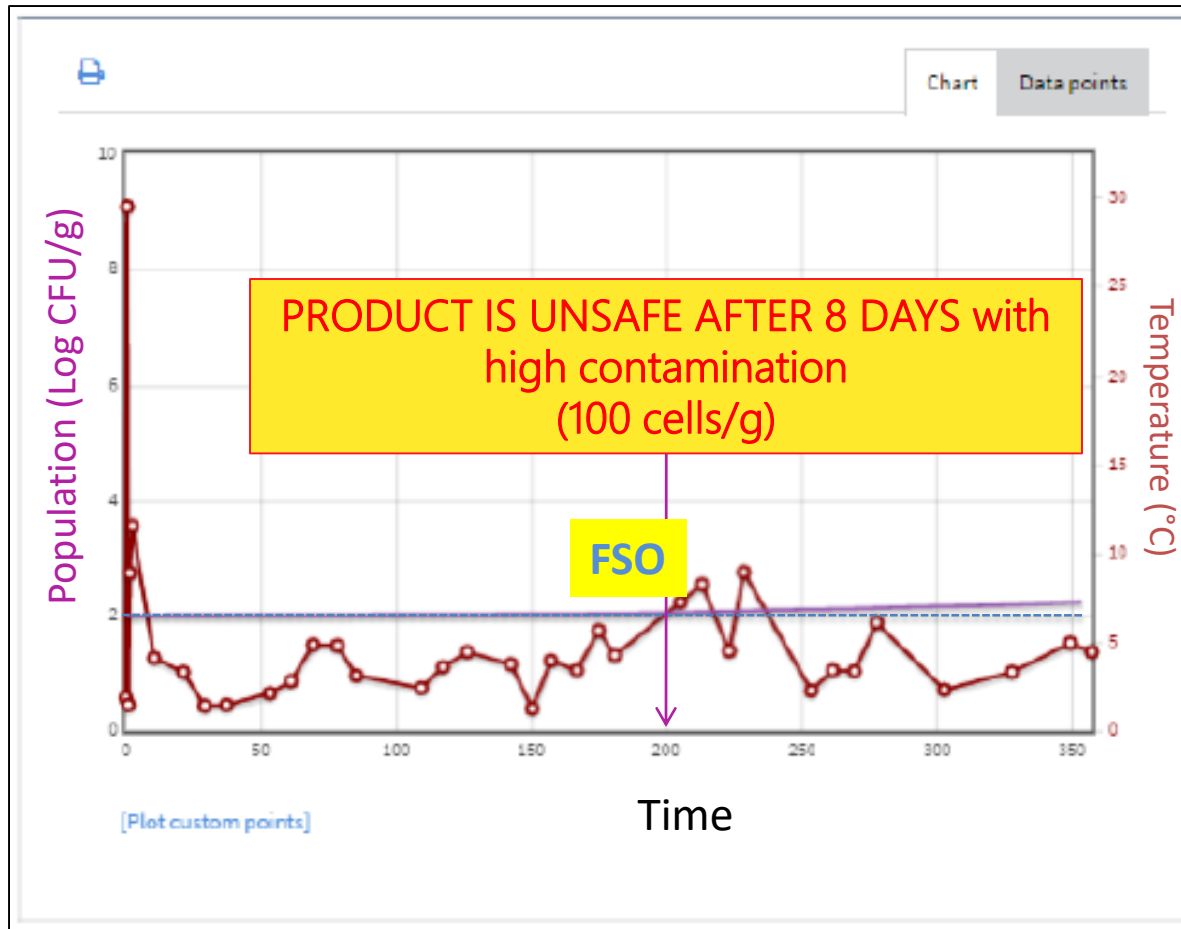


Time (hours)

Modelling under fluctuating temperature conditions



Modelling under fluctuating temperature conditions



CONCLUSION

CONCLUSION

