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## INTRODUCTION

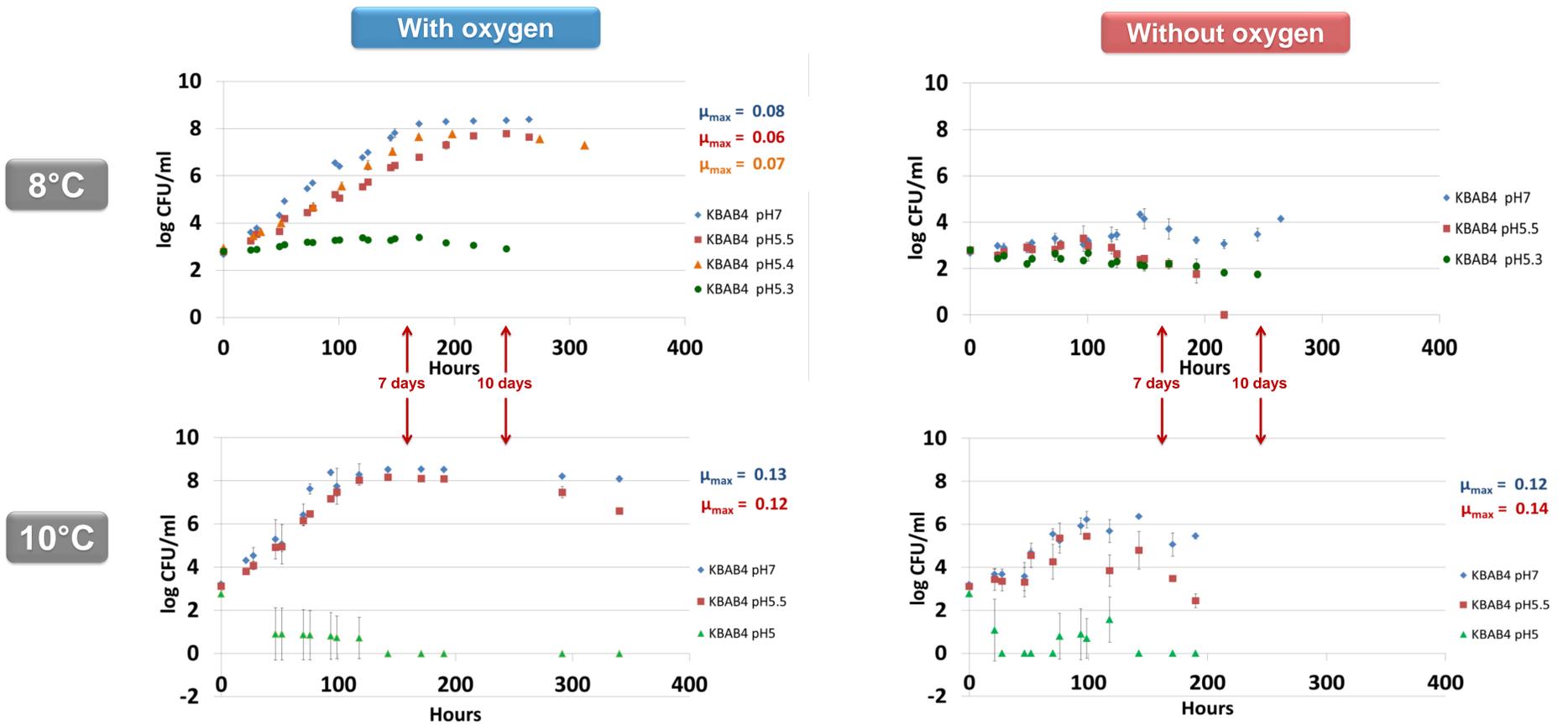
The aim of the FP7-OPTIFEL project is to create new food products based on fruits and vegetables, supplemented with specific nutrients to fight the elderly nutritional deficiencies. The microbial safety of such products is of great importance due to the high risk of foodborne disease in the elderly population.

*Bacillus cereus* spores resist the pasteurisation process. Understanding its behaviour during cold storage is essential.

The behaviour of psychrotrophic strain of *B. cereus* (KBAB4 group VI) (Guinebretiere et al., 2008) was determined at low-temperature ( $\leq 10^{\circ}\text{C}$ ), pH from 5.0 to 7.0, with (aerated) or without oxygen in rich laboratory medium (Brain Heart Infusion).

## RESULTS

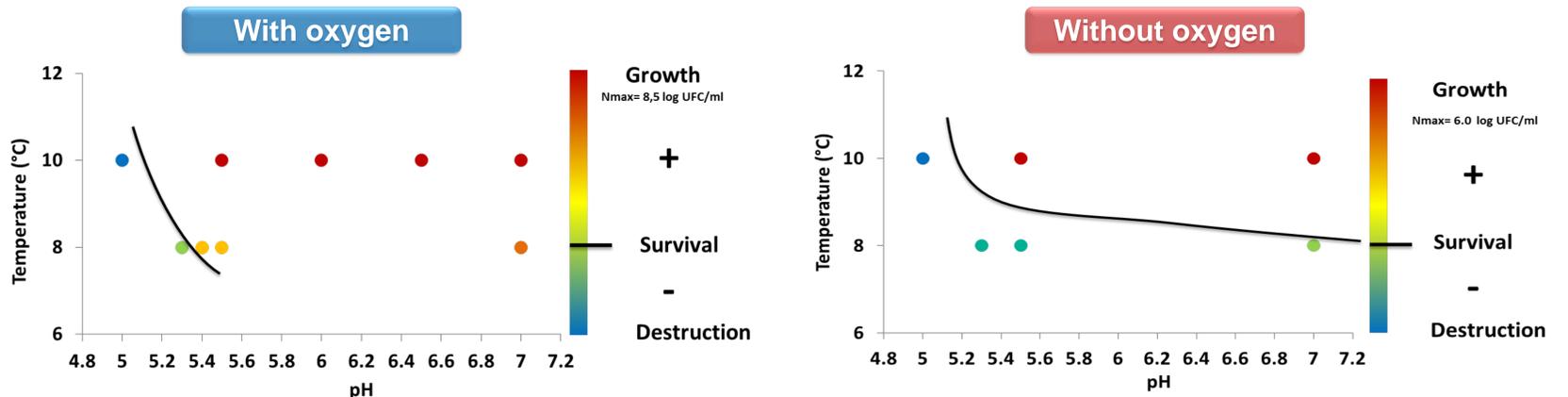
Growth of *B. cereus* KBAB4 at 8°C and 10°C and at 5 pH (7.0, 5.5, 5.4, 5.3 and 5.0)



- With oxygen at 8°C & 10°C *B. cereus* KBAB4 grow similarly between pH 7.0 and 5.4.
- At 10°C growth rates are similar ( $\mu_{max}$  around 0.13) between cultures with or without oxygen.
- Without oxygen absence of growth for cultures at 8°C and for all pH.

## CONCLUSION

Growth and no growth areas of *B. cereus* KBAB4 for : cold temperature, pH and presence/absence oxygen



➔ Packaging without oxygen should prevent growth of psychrotrophic *B. cereus* during refrigerated storage ( $\leq 8^{\circ}\text{C}$ ). In contrast pH  $\geq 5,4$  will not reduce growth during cold storage.

➔ These data will be confronted to real foods and conditions of usage by elderly

Guinebretiere et al., 2008. Ecological diversification in the *Bacillus cereus* group. Environmental Microbiology 10, 851e865.