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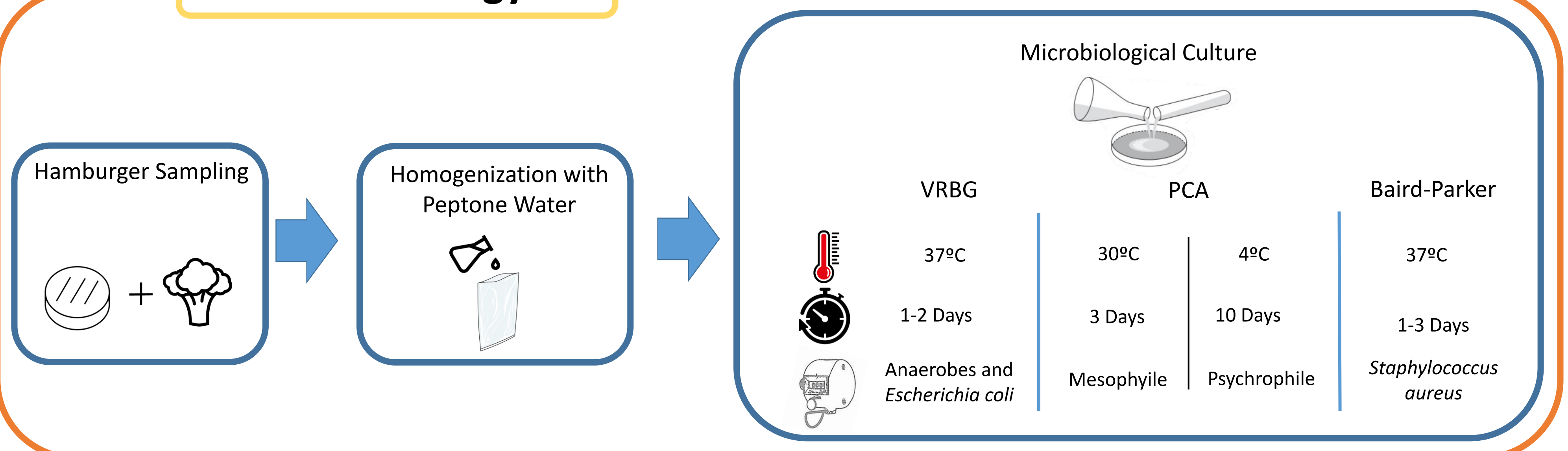
Introduction

Inside the food industry, food analysis is one of the most essential procedures to ensure, mainly, the good quality and other beneficial properties that make the final product more competitive in the market. Lately, the food conservation time has gained attraction in the food industry. In recent years, businesses are searching for alternatives that are easy to put into practice and that, at the same time, increase the net profit.

Plant extracts can become interesting food additives due to their antioxidant and antimicrobial properties. Several studies have shown that adding plant extracts reduces microbial growth and prevents oxidation of the food (1,2). Another interesting feature of plant extracts is that they can be combined with other preservation techniques like high-pressure preservation techniques (3,4).

In this practical project, samples of pork patties treated with an aqueous extract of broccoli were analyzed. The samples were taken on different days after initial packaging and were seeded on different media to identify the types and numbers of micro-organisms.

Methodology



Results and Discussion

Cultive Media	Control (CFU/ml)	Hamburger + Plant Extract (CFU/ml)
VRGB	2.4*10 ¹	4.4*10 ¹
Baird-Parker	5.4*10 ¹	3.4*10 ¹
PCA-Mesophile	9.28*10 ⁴	9.14*10 ⁴
PCA-Psychrophiles	3.6*10 ³	8*10 ²

Table 1 Average concentration of micro-organisms in Control and Treated Patty.

Figure 1 shows that the extract decreases the growth of *S.aureus* and psychrophilic micro-organisms. However, it shows no effect on the presence of mesophilic micro-organisms and seems to increase the growth of anaerobic micro-organisms.

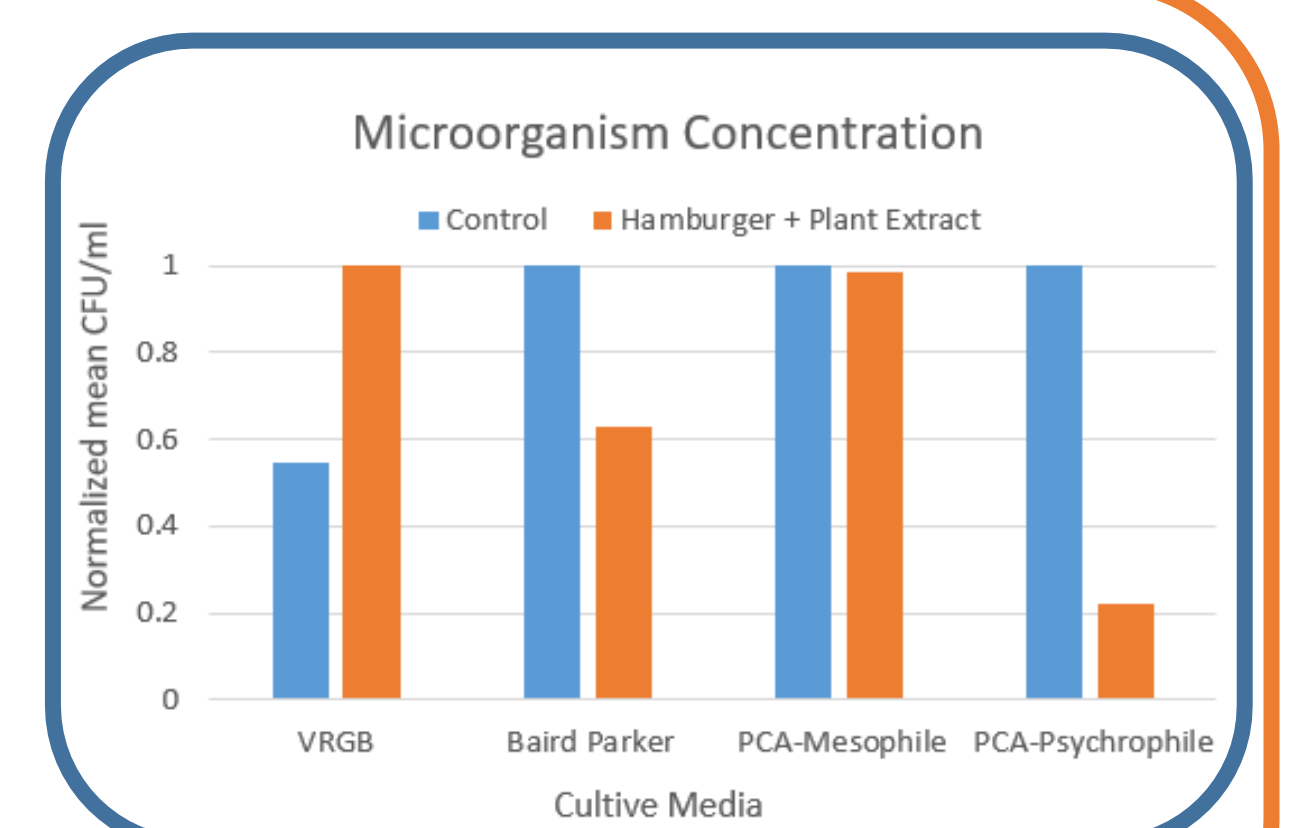


Figure 1 Standardised mean concentrations in the different media for the Control and the Patty with the extract.

References

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