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Effect of fish hydrolysate and sodium chloride on the colour of quinoa flour fermented by *Monascus purpureus*

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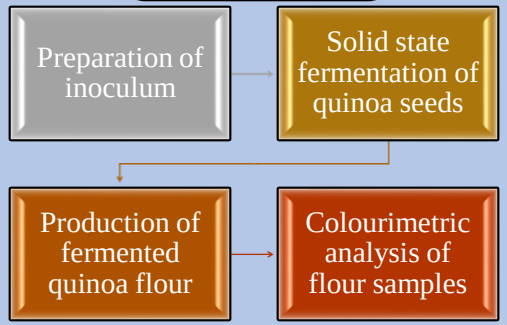
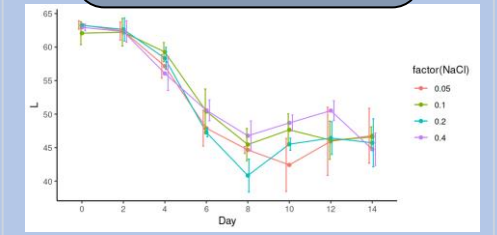
INTRODUCTION

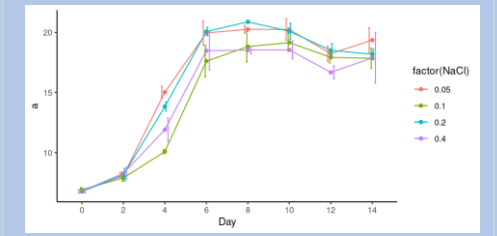
In the food industry, pigments are used to recover colour lost during processing or to improve the appearance of a product; however, there is a trend to replace artificial colourants with natural ones and a good alternative is red pigments from the filamentous fungus *Monascus* [1]. Fish hydrolysate and sodium chloride are sources of nitrogen that allow pigment production [2, 3]. In this sense, the research team focused on obtaining red-coloured quinoa grain flour from solid-state fermentation by *M. purpureus*, in order to evaluate the effect of fish hydrolysate and sodium chloride on the colour of quinoa flour fermented by *M. purpureus*.

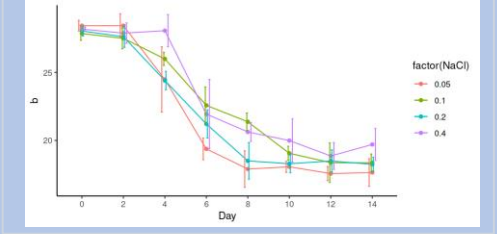
METHODS



RESULTS







CONCLUSION

There is an effect of fish hydrolysate and sodium chloride on the increase of the red colour of quinoa flour fermented by *M. purpureus* at a concentration of 0.05% sodium chloride and 1.00% fish hydrolysate, where the best results were obtained on the eighth day, with the highest values for a* (20. 27 ± 0.323) and the lowest values for L* (44.66 ± 0.532) and b*(17.89 ± 1.342) with a C:N ratio of 11.05 ± 0.240, which showed that the parameters varied over the fermentation time. This work opened up the possibility that quinoa flour could be used as a raw material pigmented by this fungus in the production of other food products.

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