

OBJECTIVES

- The main objective of this bibliographic review is to know the potential of the potato protein in the food industry.
- To study the methods of the obtention of the potato protein and the influence of these.
- To learn what are the main characteristics referring to amino acid composition and technological properties.
- To analyze the current state of the potato protein in the commercial sector

INTRODUCTION

The non-supply of animal proteins worldwide has led to an increase in plant proteins. New ways of innovation have been created through these and have raised interest in the potato protein, which is obtained through a by-product extracted from the starch .

POTATO PROTEIN ISOLATION

Potato pulp → Multi-enzymatic systems

Potato juice → Precipitation *

Precipitation *

→ Membrane separations → Ultrafiltration

→ Adsorption chromatography → EBA

* Precipitation

Ethanol (NH₄)₂ S₀₄

FeCl₃ CMC

Thermal coagulation and acid precipitation

AMINOACIDIC COMPOSITION

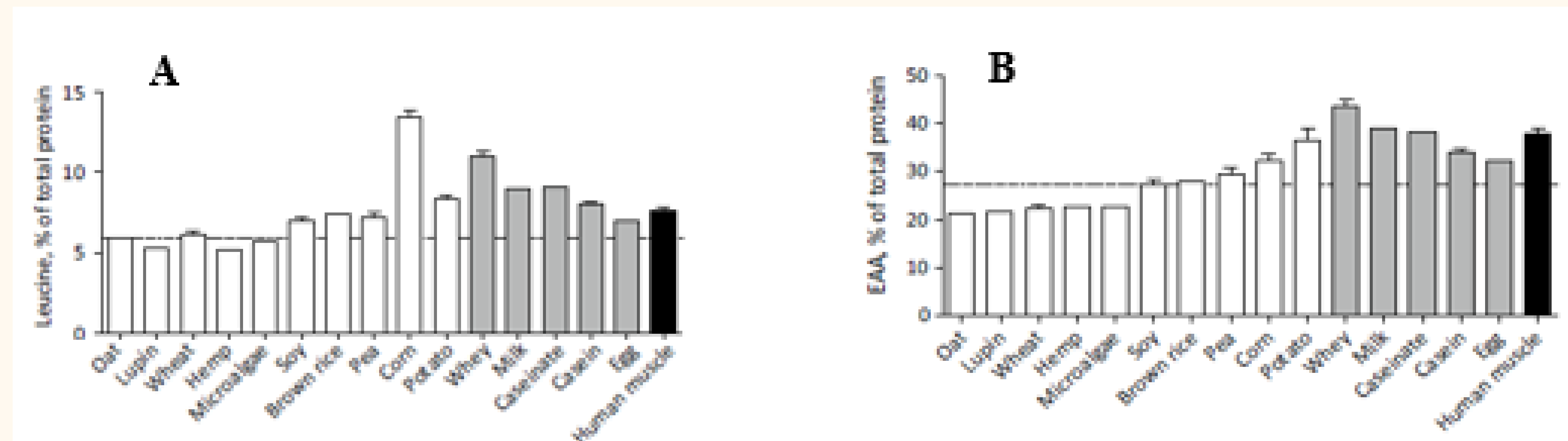


Fig.1 (A) Comparison of the percentage of leucine among the proteins. (B) Comparison of the percentage of essential aminoacids among the proteins (Oikawa et al., 2020)

TECHNOLOGICAL PROPERTIES

- Good solubility
- Emulsifying properties
- Foaming properties
- Water holding capacity

CURRENT STATE

Increasing innovation by companies



New innovation centers



High utility product



Too expensive

CONCLUSIONS

- The price of the production process has to go down in order to achieve competitive prices
- Huge potential product

REFERENCES

Oikawa S., Bahniwal R., Holloway T. M., Lim C., McLeod J. C., McGlory C., Baker S. K., & Phillips S. M. (2020). Potato protein isolate stimulates muscle protein synthesis at rest and with resistance exercise in young women. *Nutrients*, 12(5). <https://doi.org/10.3390/nu12051235>