

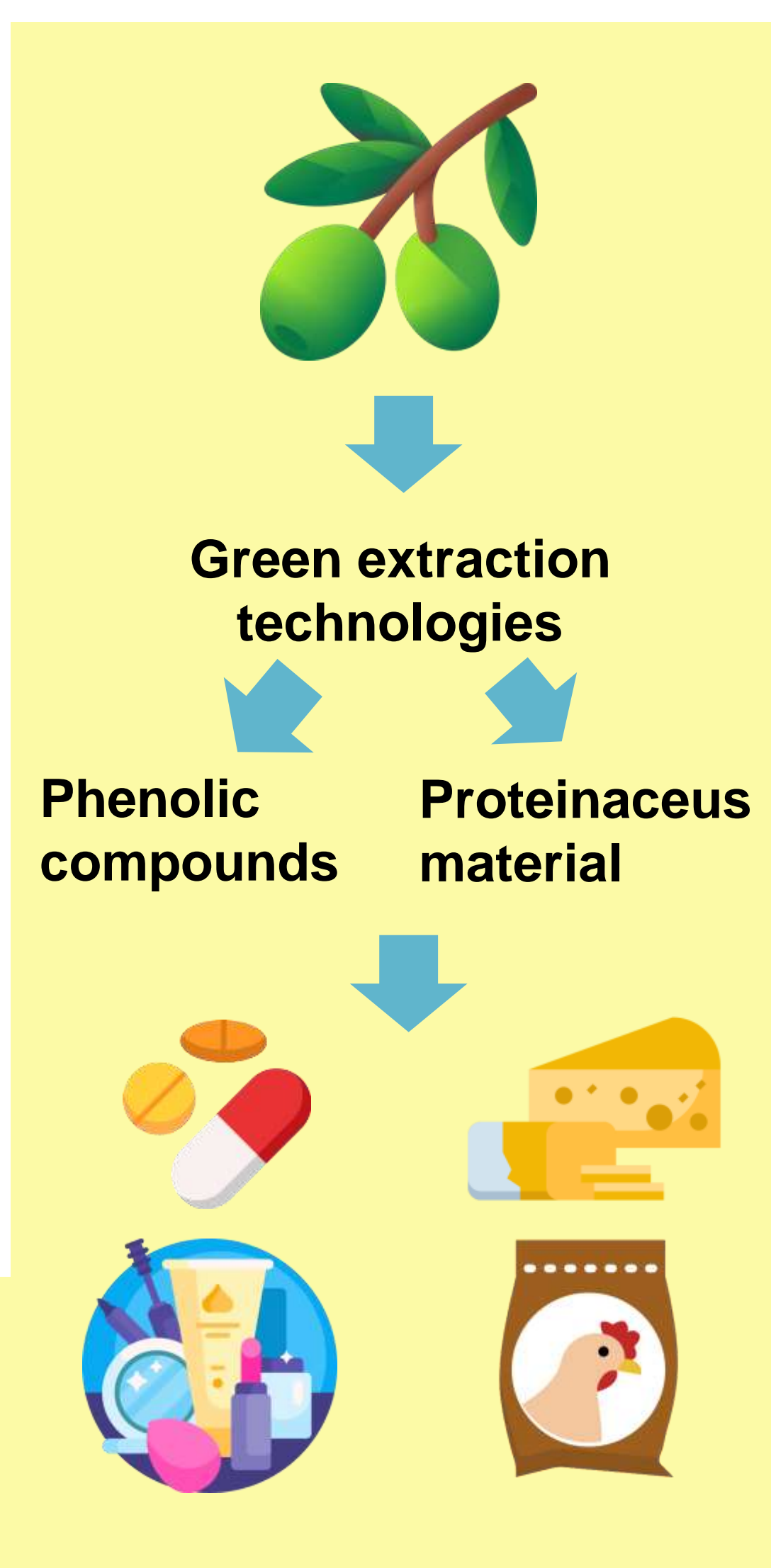
## Introduction

The current interest in using olive phenolic compounds to promote functional ingredients and antioxidant additives is increasing. To recover these compounds from olive byproducts conventional technologies such as maceration and Soxhlet extraction have been applied, but also new green trends include the use of ultrasound-assisted extraction (UAE) and microwave-assisted extraction (MAE).

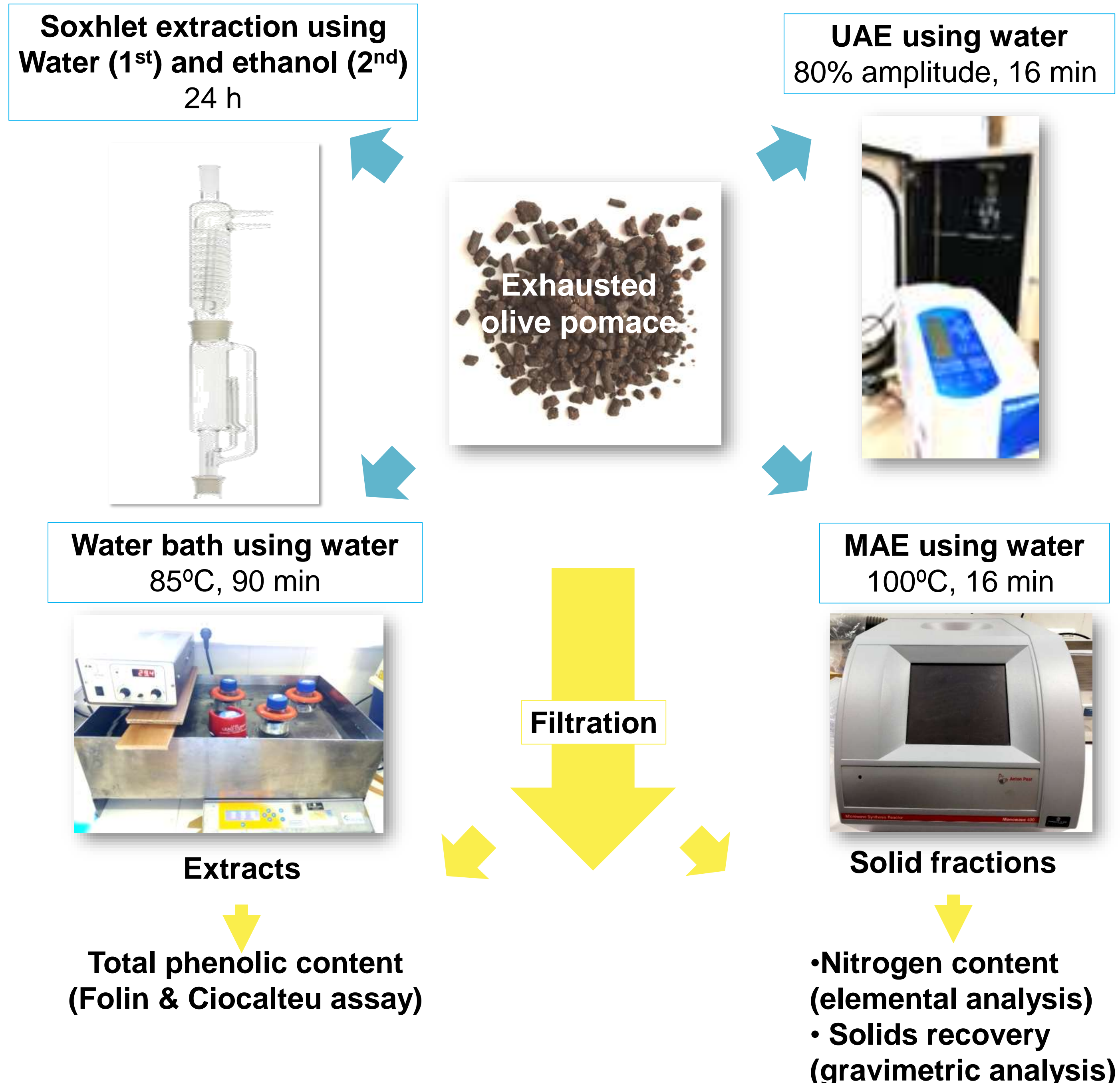
Some of the latter extraction technologies have also been applied to recover intact and partially hydrolyzed proteins from agri-food bioresources, generally, using water, alkaline solutions and buffers, obtaining different solubilization values.

## Objective

To evaluate the effect of some extraction technologies to co-extract olive phenolic compounds and protein.

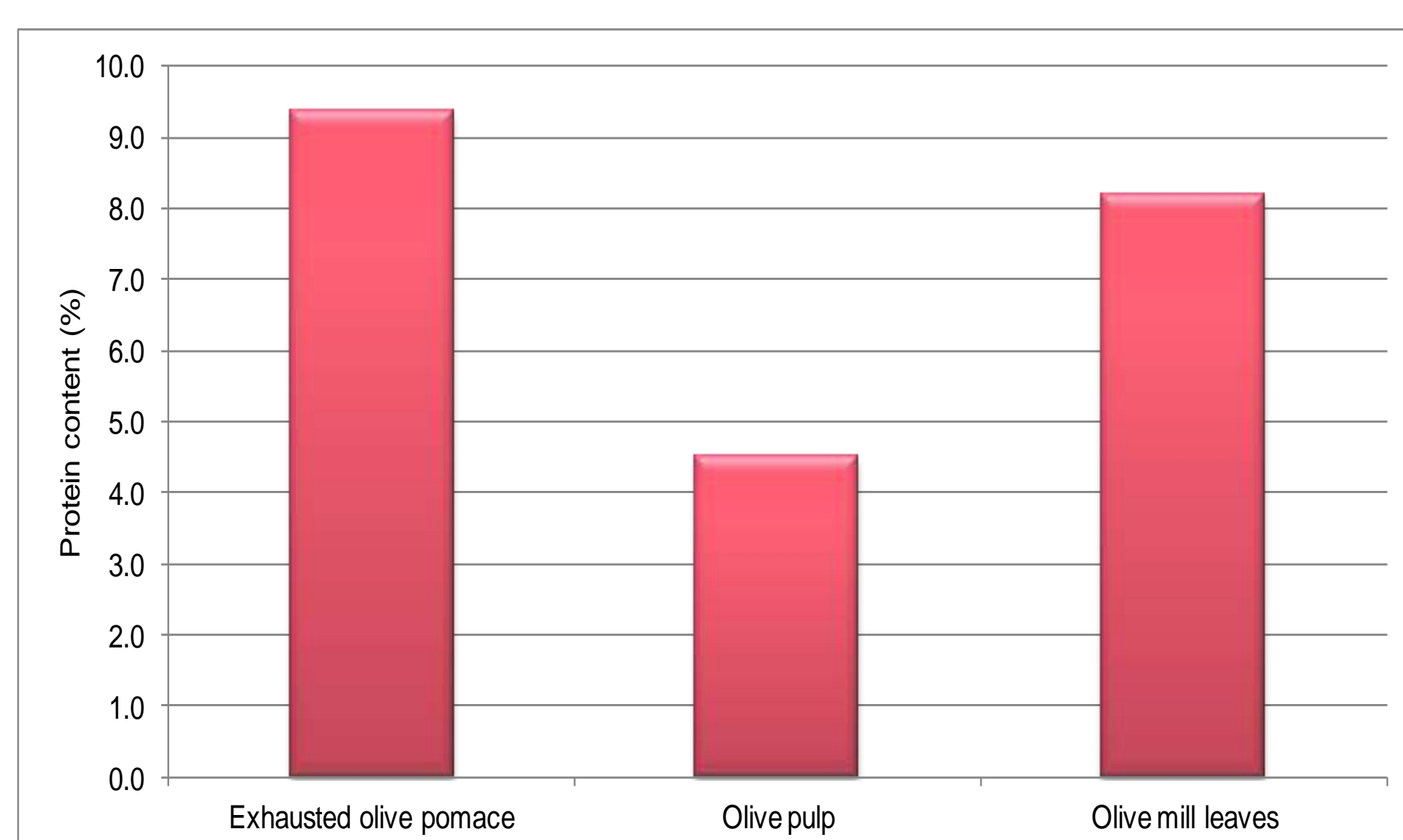


## Materials and Methods



## Results and Discussion

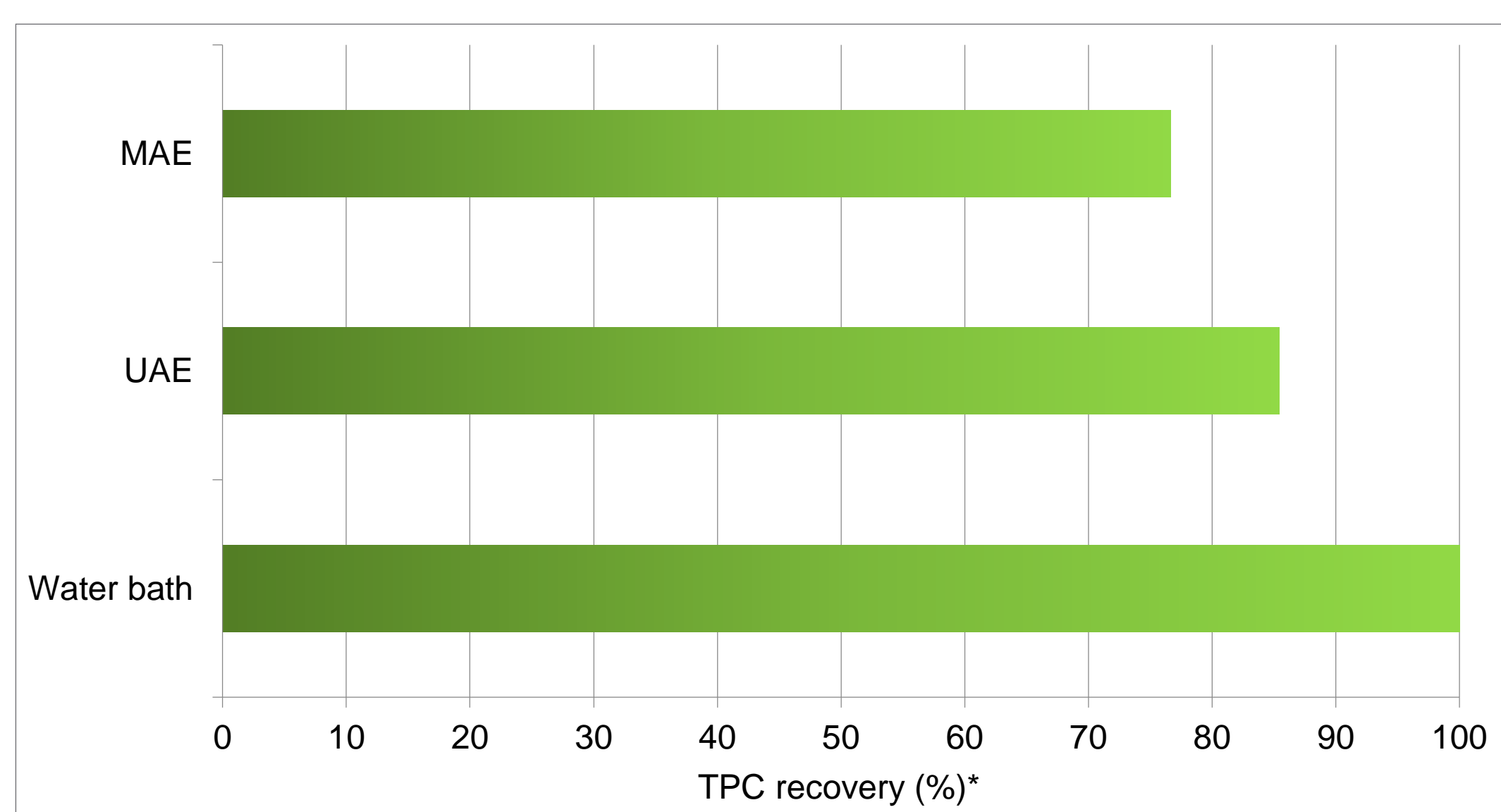
### Protein content in the raw biomasses <sup>1</sup>



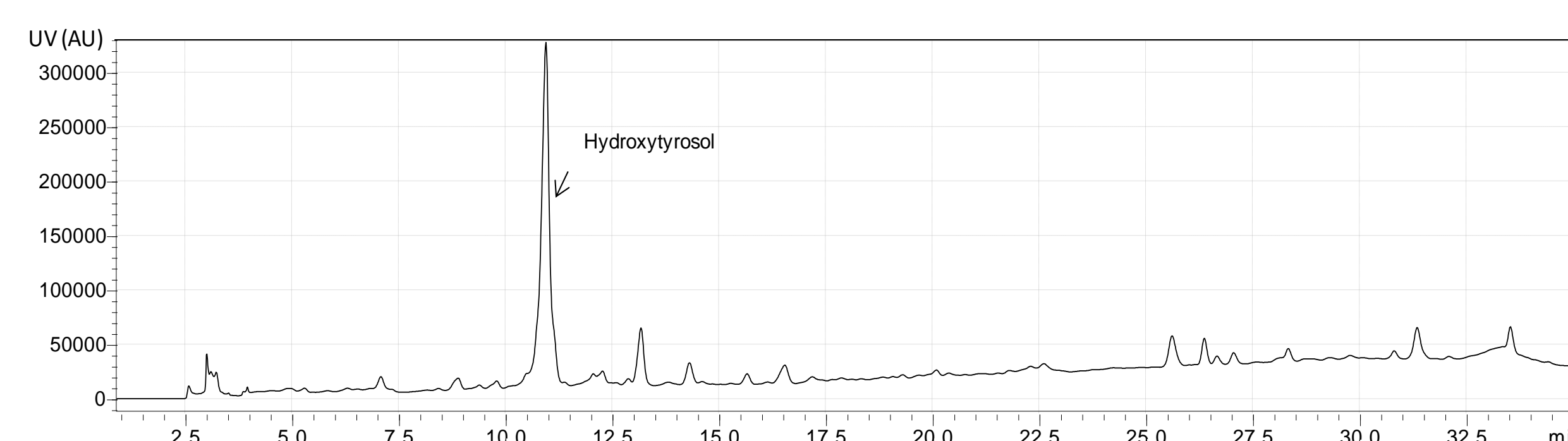
Olive waste with the highest protein content

### Total phenolic content

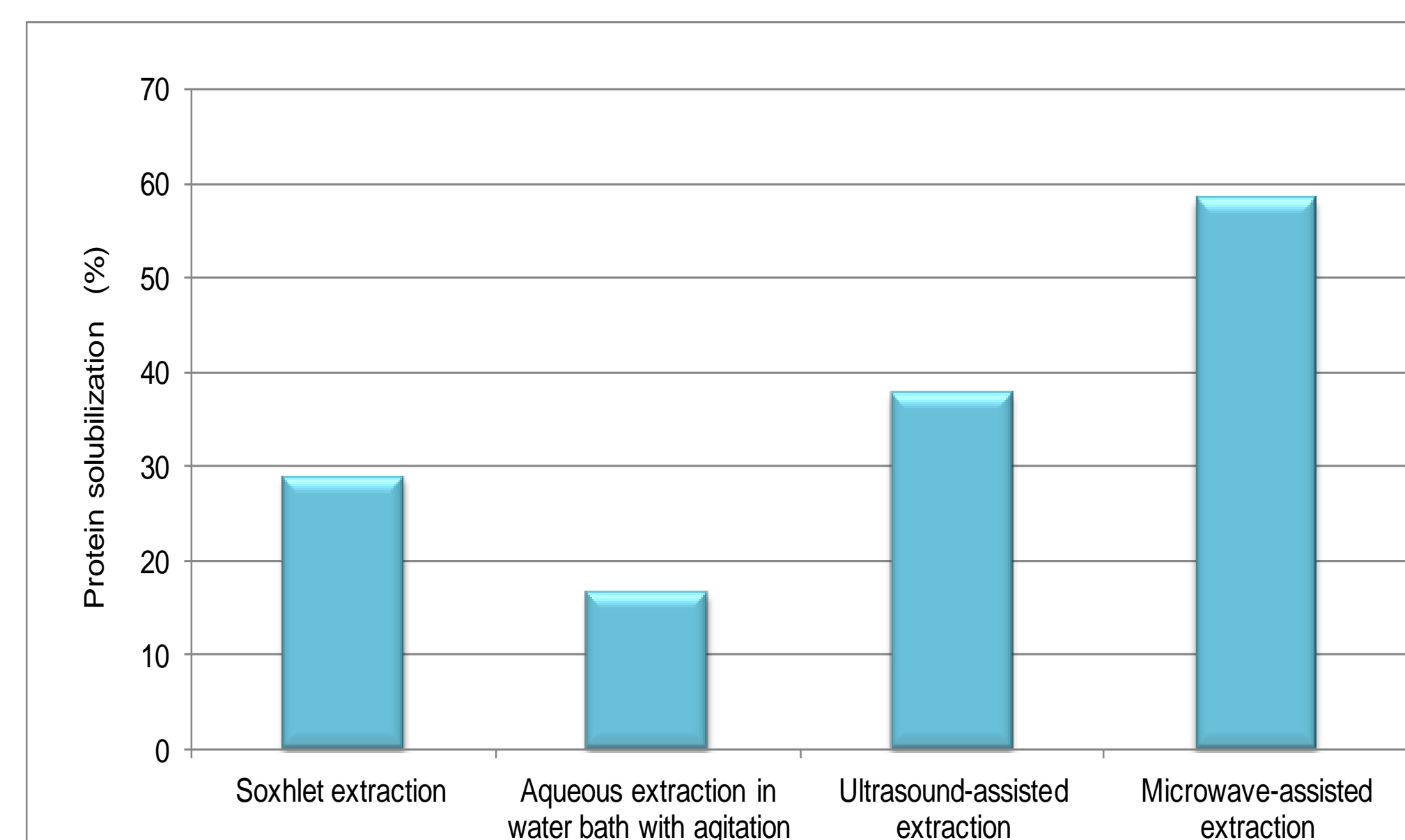
Using Soxhlet extraction and water, the highest value was reached: 4.5 g gallic acid equivalents/100 g exhaustive olive pomace



### Phenolic profile



### Protein solubilization



Solid fraction after the extraction of exhausted olive pomace with the lowest protein content and protein recovery

## Conclusions

- The technologies applied to extract phenolic compounds can provoke the co-extraction of proteins, as is the case of exhausted olive pomace.
- Among them, MAE is a green method, considering that water was used as extractive agent and a shorter time was applied, which can be applied to co-extract both phenolic compounds and protein from this bioresource.

## Acknowledgments

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## References

<sup>1</sup> Contreras, M. del M.; Gómez-Cruz, I.; Romero, I.; Castro, E. Olive pomace-derived biomasses fractionation through a two-step extraction based on the use of ultrasounds: Chemical Characteristics. *Foods* 2021, 10, 111, doi: 10.3390/foods10010111.