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Title: Turmeric nanoparticles with β -glucan and vitamins C, D3 and zinc

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INTRODUCTION



- Malnutrition in Mexico is a public health issue affecting a significant portion of the population
- Consumers are more interested in products that are not only effective in improving nutritional status but also environmentally friendly and sustainable.
- The nanotechnology has emerged as a key tool in the evolution of dietary supplements and the food industry in general. The application of nanotechnology enables the creation of more efficient and targeted products, improving the absorption and effectiveness of nutrients in the human body.



- Literature supports the use of turmeric nanoparticles as a safe material for both biomedical and nutritional applications, due to their optimal biological properties such as biocompatibility, biodegradability, and non-cytotoxicity.

- **General Objective**

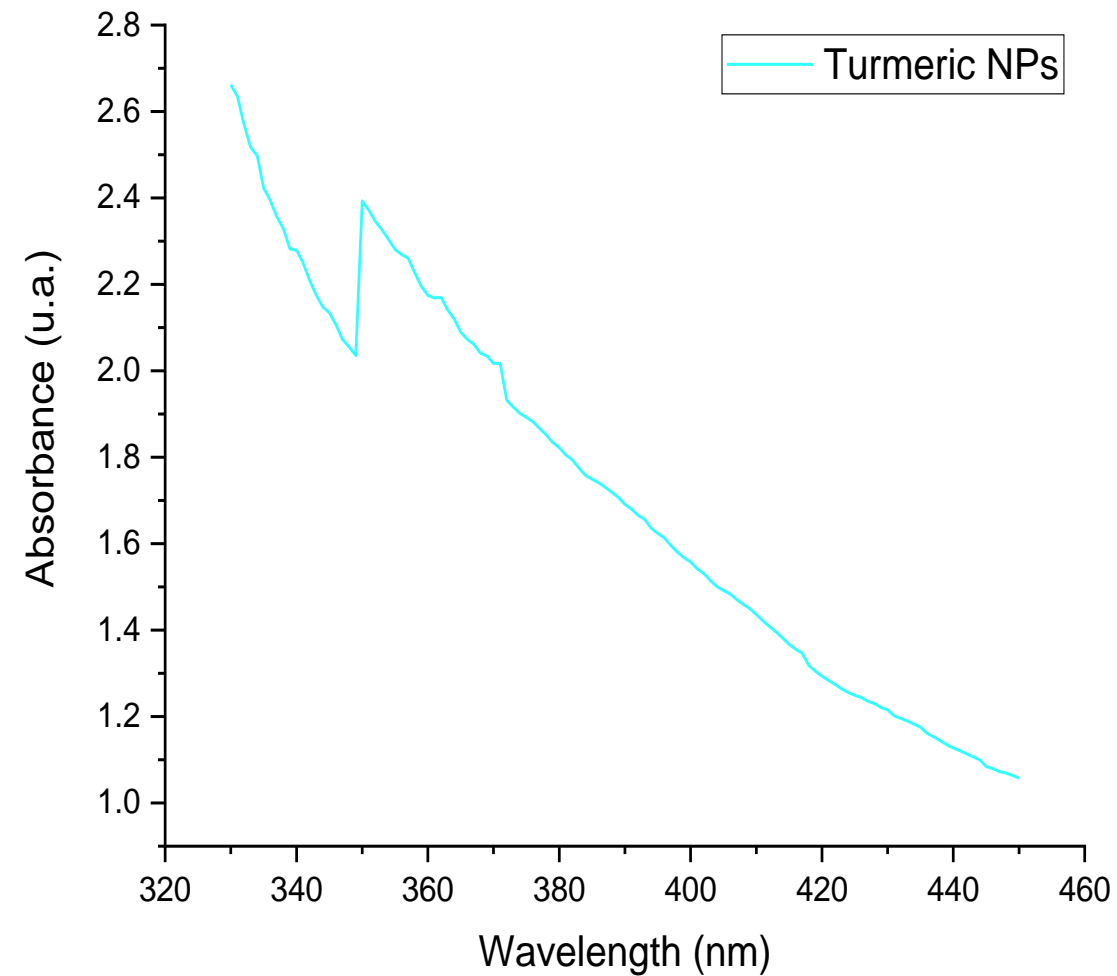
Synthesize turmeric nanoparticles loaded with β -glucan and vitamins C, D3, and zinc to evaluate their use in dietary supplements.

METHODOLOGY

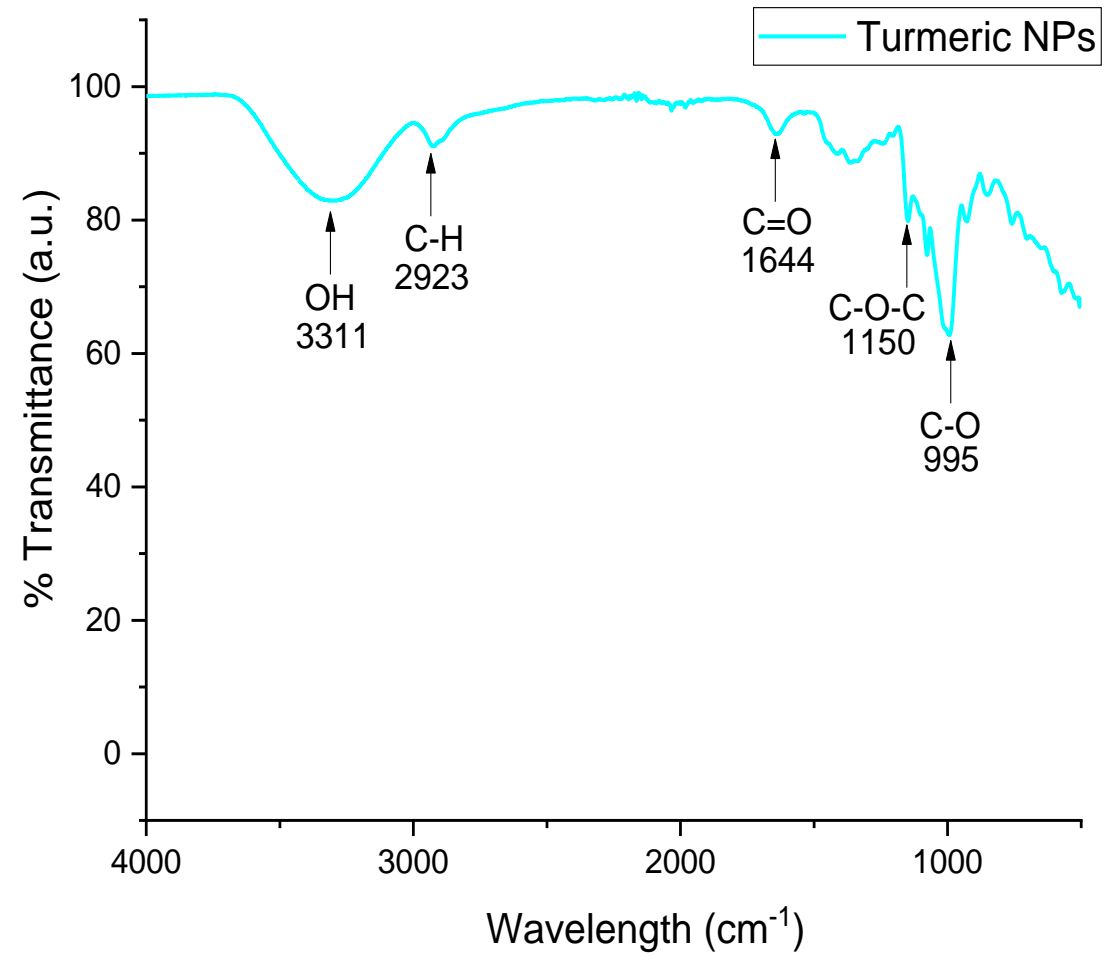


RESULTS

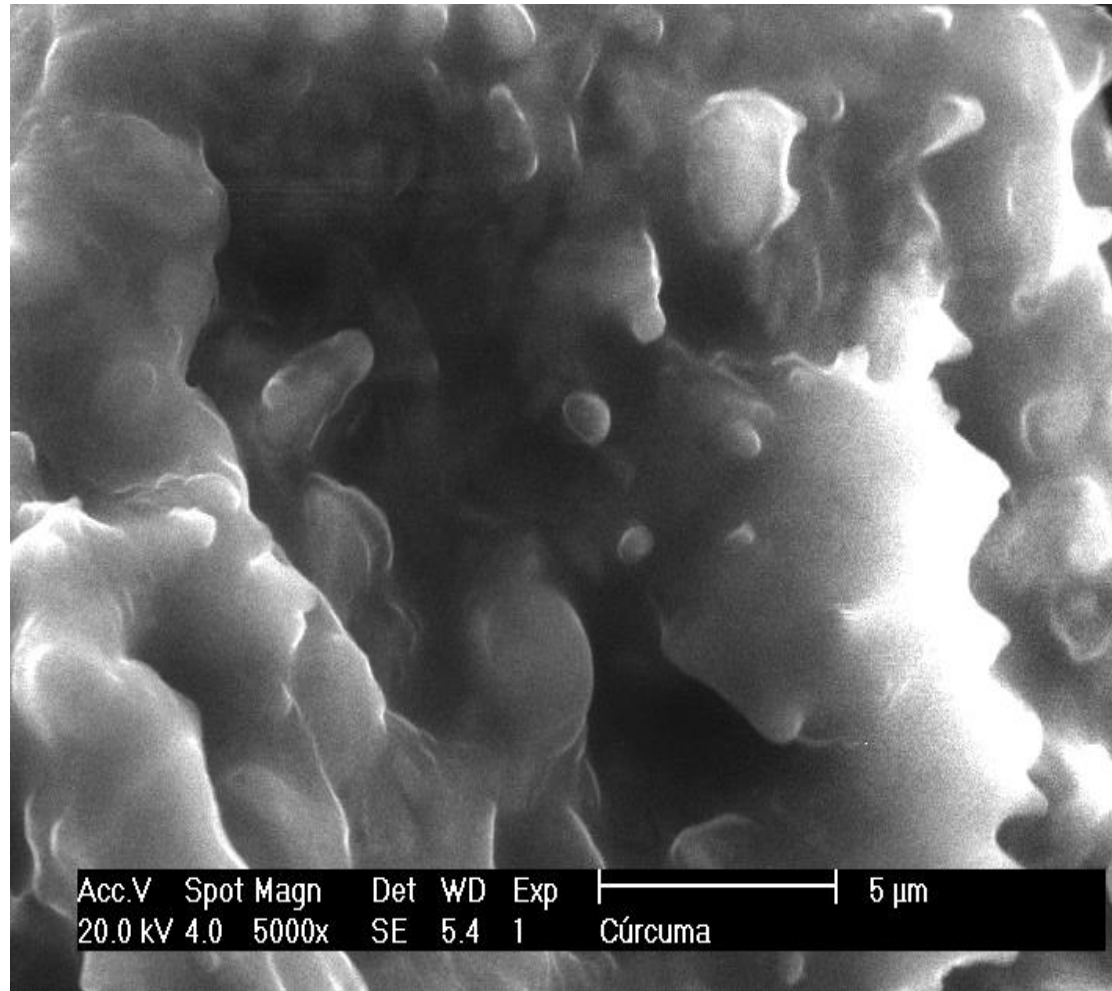
Ultraviolet-visible spectroscopy



Fourier-Transform Infrared Spectroscopy (FTIR)



Scanning Electron Microscopy (SEM)



Final product





CONCLUSION

The synthesis of turmeric nanoparticles loaded with β -glucan and vitamins C, D3 and zinc was successfully carried out, as confirmed by the results obtained by FTIR, UV/VIS and SEM analyses. Although further studies, such as cytotoxicity assays, are required to fully analyze their bioavailability. The results presented in this work provide a solid basis to consider turmeric nanoparticles as a promising option in the field of food supplements.

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