

# HARNESSING THE POWER OF GINGER FROM AZORES ISLAND: A SUSTAINABLE APPROACH TO HEALTH

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## INTRODUCTION

Rich in bioactive compounds, mainly phenolic compounds, ginger is associated with beneficial biological activities, including antioxidant and anti-ageing effects. These properties make this matrix invaluable for therapeutic applications and offer substantial health benefits.



## OBJECTIVES

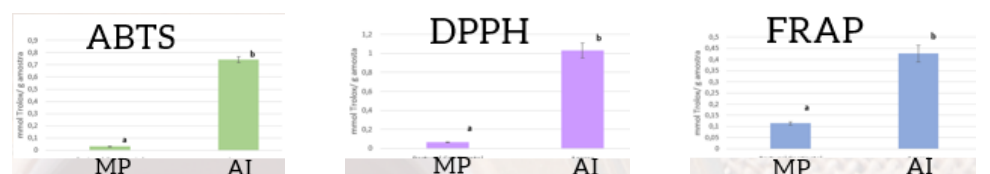
Evaluate the phytochemical composition and biological activities of two geographically distinct samples of Ginger: one from mainland Portugal (MP) and other from Azores island (AI)

## SUSTAINABLE GOALS

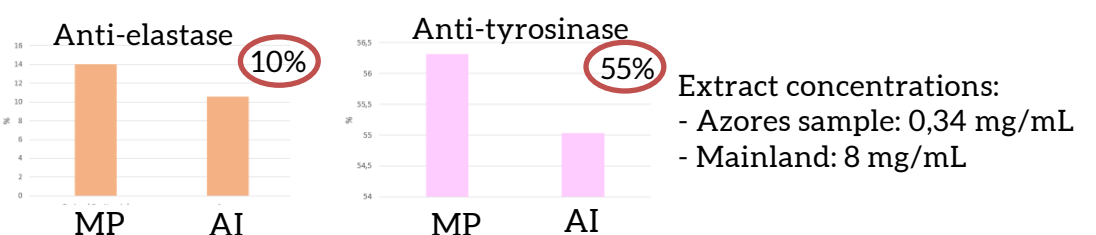
This study aligns with UN Sustainable Development Goal 12, which promotes responsible consumption and production.



### Antioxidant capacity



### Enzyme inhibition activity



Extract concentrations:  
- Azores sample: 0,34 mg/mL  
- Mainland: 8 mg/mL

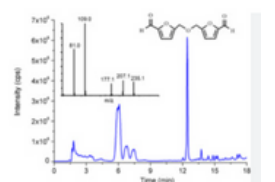
## MATERIALS & METHODS

### Phenolic Composition

Total Phenols, *orto*-diphenols and flavonoids



HPLC-MS



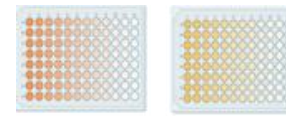
### Antioxidant capacity

ABTS, DPPH and FRAP assays



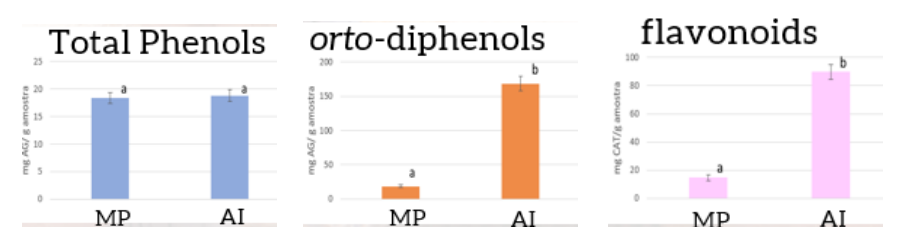
### Enzyme inhibition activity

Anti-tyrosinase and anti-elastase assays

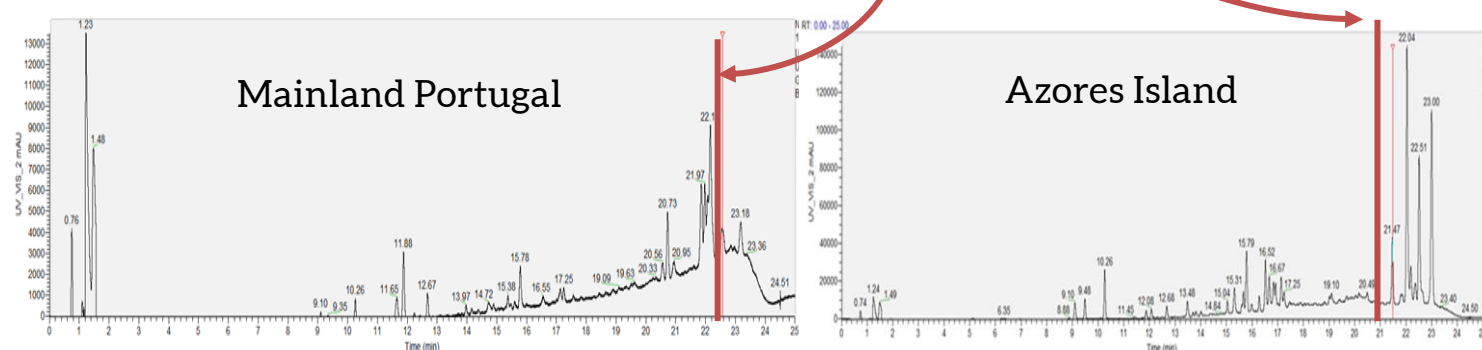
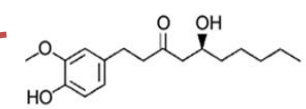


## RESULTS & DISCUSSION

### Phenolic Composition



### 6-gingerol



## CONCLUSION

Ginger from the Azores has significant potential in the development of new products with health benefits, through its use in combating diseases associated with oxidative stress and skincare.

