Characterization of the vitamin E profile in extra virgin olive oils from the Douro Region

INTRODUCTION

Olive oil is one of the most important components of the Mediterranean diet not only due to its cultural influence, but also due to its organoleptic and nutritional characteristics. In addition, olive oil has certain compounds, such as vitamin E, with an important technological and biological activity, associated with the olive oil shelf life and human health. On the other hand, the diversity of cultivars and geographical origins is responsible for a huge range of compositional variation.

AIM

This study aimed to characterize the compositional variability of vitamin E in olive oils from different areas of the Douro region, NE Portugal.

SAMPLING

A total of 57 independent olive oil samples from different areas of the Douro region, NE Portugal, were analysed.

RESULTS

VITAMIN E CONTENT

Average = 215 mg/kg

DISCUSSION

• The total vitamin E content varied between 123 mg/kg and 342 mg/kg consistent with published literature;

• α-Tocopherol represented 93.9% to 98.4% of the total vitamin E, consistent with authentic olive oil;

• Samples 1, 32, 48, 51, 54, 56 and 57 deserve further attention due to their increased vitamin E content.

REFERENCES


CONCLUSION

• The vitamin E profile found was representative of olive oil, with no signs of adulteration;

• Although being form the same region, the vitamin E contents are highly variable;

• These results should be compared with other important chemical, bioactive and sensorial attributes to seek for potentially interest spots;

• The outcomes of this study contribute for enhancing the knowledge of olive heritage from the Douro region by demonstrating their potential to provide a favorable and authentic antioxidant pool with great benefits from a nutritional and oil quality perspective.

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