

**XX ENCONTRO  
LUSO-GALEGO  
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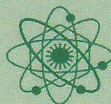
**26 A 28 NOVEMBRO 2014**

**PORTO - PORTUGAL**

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**SOCIEDADE  
PORTUGUESA  
DE QUÍMICA**



**ASOCIACIÓN DE  
QUÍMICOS DE GALICIA**



**Colegio Oficial de  
Químicos de Galicia**

**TÍTULO**

Livro de Resumos do XX Encontro Luso-Galego de Química

**COORDENADORES**

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**EDIÇÃO**

Sociedade Portuguesa de Química  
Av. Da República, 45 – 3º Esq  
1050-187 Lisboa – Portugal

**DATA**

Novembro de 2014

**TIRAGEM**

400 Exemplares

**ISBN**

978-989-98541-7-8

**EXECUÇÃO GRÁFICA**

FFUP . Joana Macedo (design)  
Sersilito – Maia (impressão)

**CATALOGAÇÃO RECOMENDADA**

Livro de Resumos do XX Encontro Luso-Galego de Química  
Faculdade de Farmácia, U. Porto, 2014 – 460 p.  
ISBN 978-989-98541-7-8  
Química – Congressos

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Os Coordenadores declaram que o conteúdo dos resumos científicos é da inteira responsabilidade dos respetivos autores.

QAMA77

## Characterization of phenolic content and antioxidant activity of three blueberry cultivars grown in the north of Portugal

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Blueberries are considered to be a good source of phenolic compounds which are associated to their antioxidant activity and so to their potential health benefits [1]. The content of phenolics in berries is affected by genetic differences, pre-harvest environmental conditions, by the degree of maturity at harvest [2] but also by differences in growing locations and storage conditions [3]. The knowledge about these characteristics of Portuguese cultivars remains scarce.

In this work three cultivars (Duke, Bluecrop, and Ozarblue) of blueberries grown by two different Portuguese producers were analysed. The aim of this work was to determine the phenolic composition (total phenols, anthocyanins and tannins) and antioxidant activity of blueberries, and evaluate the effect of region of production.

Two successive extractions with methanol followed by two extractions with acetone solutions were carried out. The extracts obtained were then used to characterize the phenolic composition and the antioxidant activity.

The total phenols quantified ranged from 6.1-8.2 mg GAE/g for Duke, 4.9-5.2 mg GAE/g for Bluecrop, and 6.1-6.8 mg GAE/g for Ozarblue. For the three cultivars, the samples collected in producer P2 presented higher content of phenolic compounds. The values quantified ranged from 1.5 to 2.8 mg EMv3G/g for anthocyanins and from 1.5 to 3.8 mg/g for tannins. The anthocyanins were obtained in the methanolic extract, while tannins were extracted in a similar way in the methanolic and acetone extracts. Regarding antioxidant activity, the results ranged from 9.3 to 23.2 mmol TE/g, and from 24.7 to 53.4 mmol TE/g, when measured, respectively, by DPPH and ABTS methods.

In general, the amounts quantified varied according to each cultivar. The location of production showed to be an important factor, since the blueberries collected from one farm contained higher amounts of phenolic compounds and antioxidant activity.

Acknowledgements: ESAV-IPV, FCT, CI&DETS

### REFERÊNCIAS

(Deve ser utilizado o formato que se apresenta em baixo (mantendo Times New Roman, 8)

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