

Quality parameters, total phenolic content and antioxidant activity in different maturation stages of 'Sweetheart' cherry

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Introduction

Portugal produces more than 15 thousand tons of cherries per year and it is in the Beira Interior region where this fruit is more cultivated. The cherry fruit is considered a nutrient dense food with a relatively low caloric content and a significant amount of important nutrients and bioactive food components. The aim of this work was to determine the stages of maturation of 'Sweetheart' cherry from Cova da Beira (Portugal).

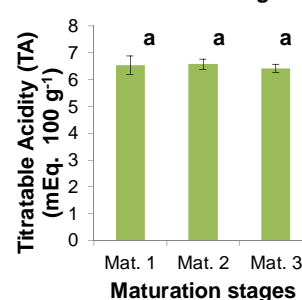
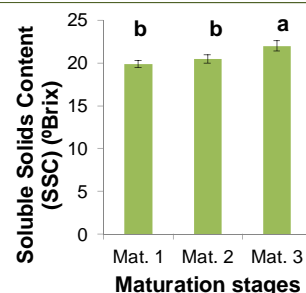
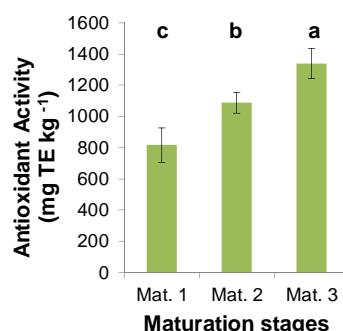
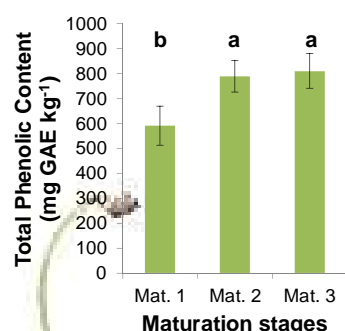
Material and Methods

- Fruit colour, L*, a* and b* (Minolta CR-400)
- Firmness (TA.XT Plus, Stable Microsystems) Compression until 5 % deformation
- Soluble solids content, SSC (Atago PR32α)
- Titrateable acidity, TA (Titromatic 2S -Crison)
- Total phenols (GBC UV Vis)- Folin-Ciocalteu reagent method
- Antioxidant Activity- DPPH method

Results

Maturation stage	L*	a*	b*	Firmness (N)
Mat.1	28.2 1.6 ^a	20.7 3.5 ^a	4.7 1.5 ^a	3.1 0.5 ^{a,b}
Mat.2	26.8 0.9 ^b	16.1 2.5 ^b	2.9 0.8 ^b	3.3 0.5 ^a
Mat.3	26.8 1.3 ^b	11.7 2.7 ^c	1.9 0.7 ^c	2.9 0.5 ^b

Values are expressed as the mean standard deviation. Mean values in the same column with different superscripts (a-c) are significantly different ($p < 0.05$) between the different maturation stages of 'Sweetheart' cherry.



Conclusions



- ✓ We can consider that this cultivar has an interest in nutritional terms, which may contribute to the enhancement of 'Sweetheart' cherry from the Cova da Beira region.
- ✓ These data provide complementary information which can be used to ensure the quality and establish the maturation stage which indicate the optimum harvesting time of this regional product, 'Cereja da Cova da Beira'.

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