CHARACTERIZATION OF CHERRY TOMATOES GROWN UNDER ORGANIC AGRICULTURE

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INTRODUCTION

- Nowadays, breeding of tomato varieties (*Lycopersicon esculentum L.*) has priorized fruit production, resistance to pathogens and to adverse temperatures, etc.

- There are a increasing interest to priorize other traits involved in as the organoleptic and nutritional quality.

- These values have been preserved in traditional varieties.

AIM

- To characterize both physico-chemical and nutritionally traditional cherry tomato landraces grown under protected organic conditions in order to identify varieties with a high nutritional and sensitive quality.

MATERIAL AND METHODS

8 SPANISH LANDRACES

Organic horticulture

Digital caliper

Balance: weight

Texturometer: firmness

Refractometer: Total Soluble solids

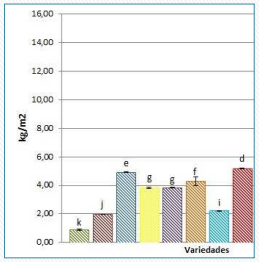
Spectrocolorimeter: Colour

Titrater: pH, Citric acid, Ascorbic acid

Spectrophotometer UV-VIS: Licopen, Total phenolic, Antioxidant activity

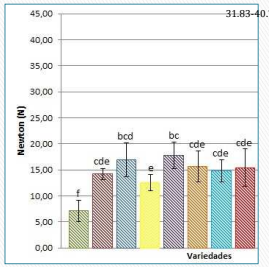
RESULTS

Yield



0.89 to 5.18 kg/m²

Firmness

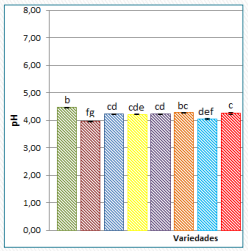


31.83-40.77mg/100g

15 – 20 N Firmes

> 20 N Muy firmes

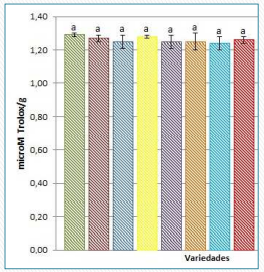
pH



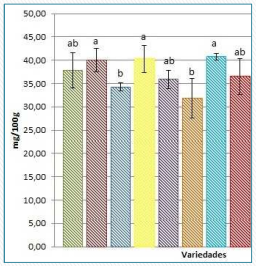
Optimal values pH between 4 – 5
Only Ch2 was ***Valores óptimos***
V.Cherry: ≥ 8 ➡ Brix pH<4

No differences among varieties

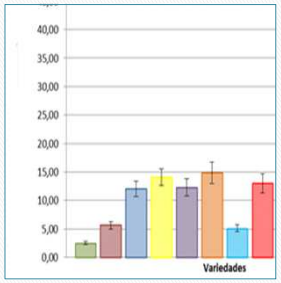
Antioxidant capacity



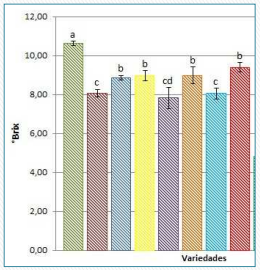
Ascorbic acid



Weight

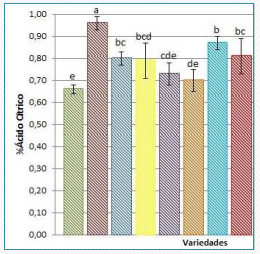


Soluble solids

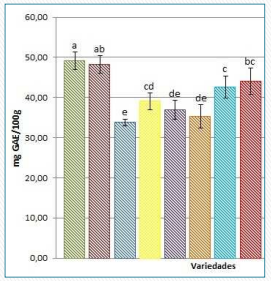


Optimal values for Cherry tomatoes: ≥ 8 °Brix

Citric acid

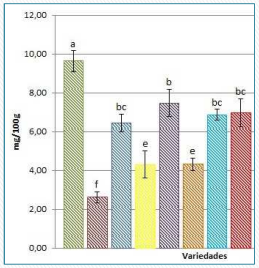


Total Phenolic acid



33.81-49.22mg Galic acid equivalent/100g

Licopen



Ch1 showed the highest licopen content

CONCLUSION

- Because the adecuate content of paramethers that determine flavor (ph, soluble solids and titrable acidity) variety Ch8 is the most recomendable

- Most complete content of compounds of nutritional interest and higest antioxidant activity can be found in variety Ch7

- Lycopen content of the landraces tested has result very variable, all of them with high enough content to respond the demands of these nutrient in diet