



IMPROVEMENT OF 'SWEETHEART' CHERRY QUALITY BY MODIFIED ATMOSPHERE PACKAGING

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OBJECTIVE

To evaluate the effect of modified atmosphere packaging (MAP), using a ZOEpac film, on quality of 'Sweetheart' cherry of Cova da Beira (Portugal), a region that has a Protected Geographical Indication registration.

MATERIAL AND METHODS

Fruits

Prunus avium L. cv. Sweetheart

Orchard in Cova da Beira (Portugal)

Supplied by Cerfundão packinghouse

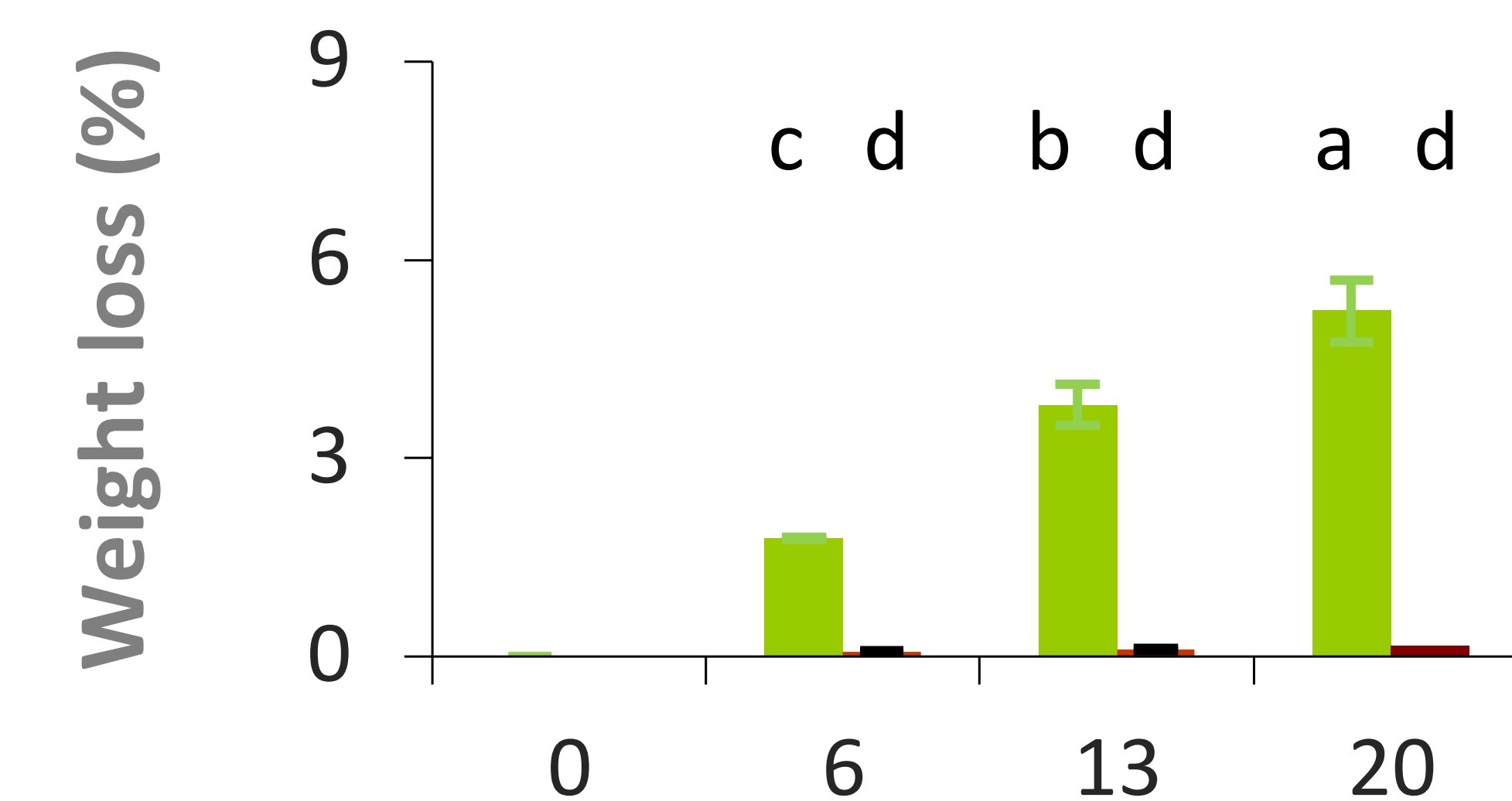
Postharvest treatments

Control	2 °C and 70-80 % RH
MAP	ZOEpac film

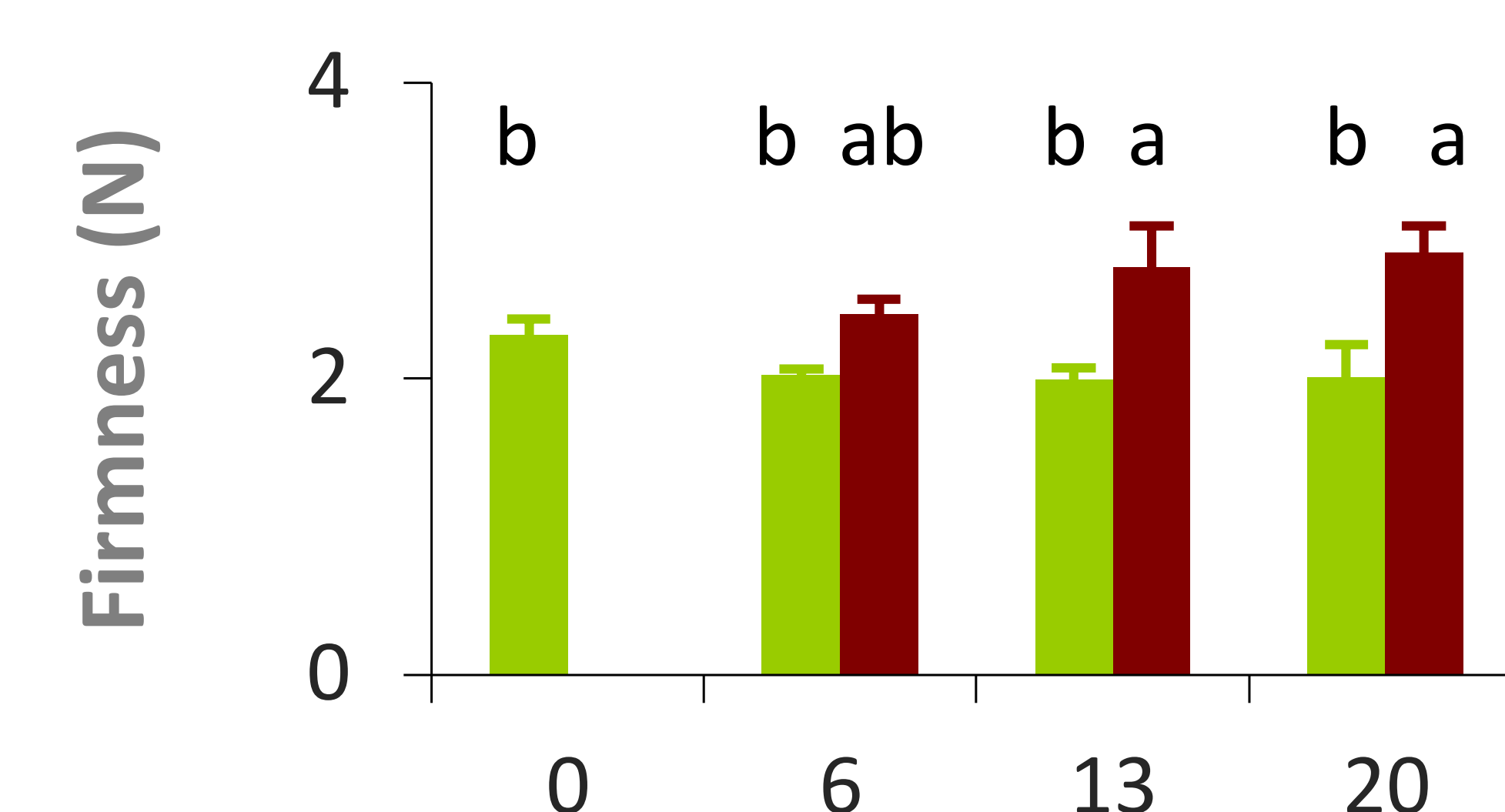
Analytical determinations

- Weight loss
- Fruit colour, L*, C* and h (Minolta CR-400)
- Firmness (TA.XT Plus, Stable Microsystems)
Compression until 5 % deformation
- Soluble solids content, SSC (Atago PR32α)
- Titratable acidity, TA (Consort C861)
- Total phenols (GBC UV Vis)
Folin-Ciocalteu reagent
- Epiphytic moulds and yeasts counts
(ISO 21527-1:2008)

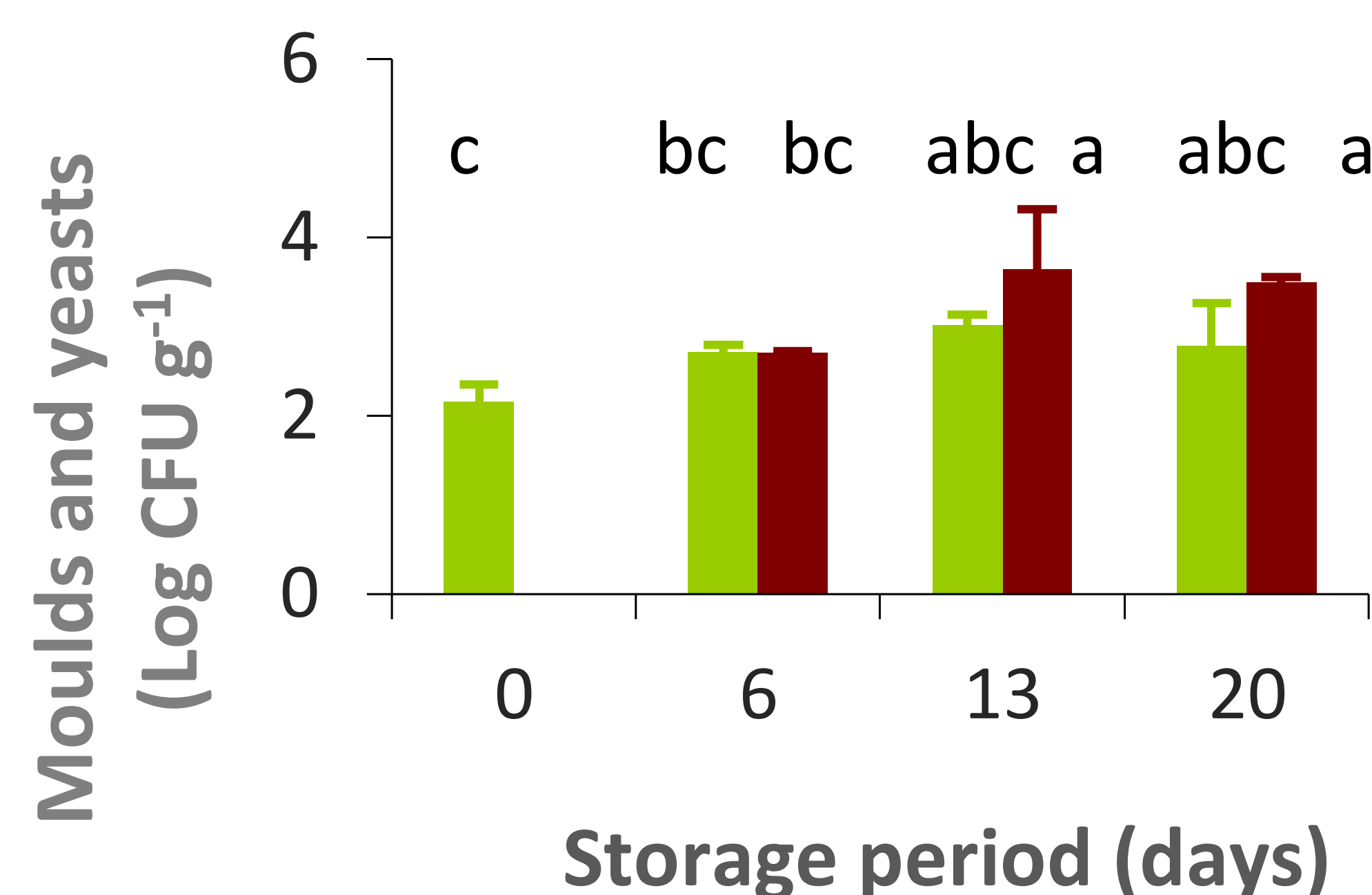
RESULTS AND DISCUSSION



WEIGHT LOSS was below 0.20 % in MAP, whereas in control it reached 5.23 % after 20 days.



FIRMNESS increased in MAP, whereas in control it remained constant over storage. This evolution could be due to the high water vapour pressure inside the package, since fruit firmness was measured on superficial tissues.



MOULDS AND YEASTS COUNTS were similar in MAP and control fruits after 20 days of cold storage plus 1 day at ambient temperature.

In both treatments no modifications in colour parameters, SSC and total phenols were found. TA declined steadily throughout storage (data not shown).

IN CONCLUSION, MAP reduced weight loss and increased fruit firmness, with no effect on moulds and yeasts counts, synonymous of a quality improvement in cherry by modifying atmosphere with ZOEpac.

ACKNOWLEDGEMENTS

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