

Raspberry

2021



AIM OF THE STUDY:

WHAT IS THE IMPACT OF HDCOLD® TECHNOLOGY ON RASPBERRY STORAGE QUALITY COMPARED TO A STANDARD COLD ROOM?

Current practice^{1,2}:

- Fruit with a high respiratory rate, therefore rapid evolution is to expect
- Storage: 1°C / 90-95 % RH for 5 to 7 days

Existant technologies to extend storage:

- Controlled atmosphere
- Modified atmosphere packaging

HDCold® technology:

- Cold system which maintain natural relative humidity at high levels (>98 %)
 - No addition of liquid water
 - Decrease of water loss, and therefore weight loss of the products
- Low temperature difference between the set point and the refrigerant:
 - Less hydric stress on the products
 - Less to no frost formation

¹ Mitcham et al., 1998. *Bushberries Fact Sheet*, Accès en sept. 2025.
<https://postharvest.ucdavis.edu/produce-facts-sheets/bushberry>

² Schenk A., 2022. *Comment maintenir la qualité des petits fruits pendant la conservation ? Présentation de la Journée Nationale Petits Fruits Rouges 2022 (CTIFL)*



RESULTS

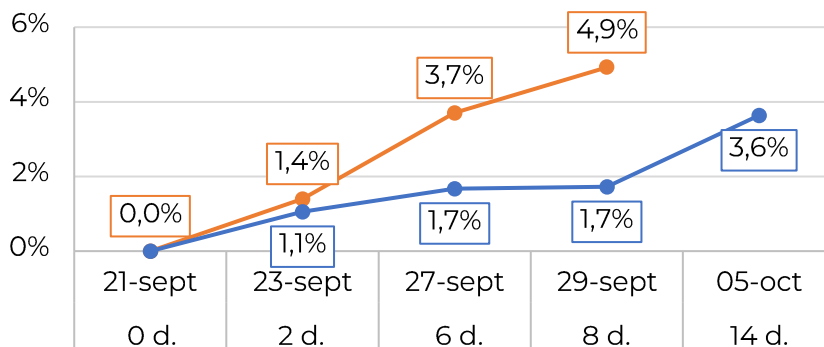
Harvest: 21 sept. 2021 (8,6°Bx ; 18,4 g/L titrable acidity)

Origine : South-West, France

Classical cold room (1°C ; HR non régulée)

HDCold® cold room (1°C ; 98% HR)

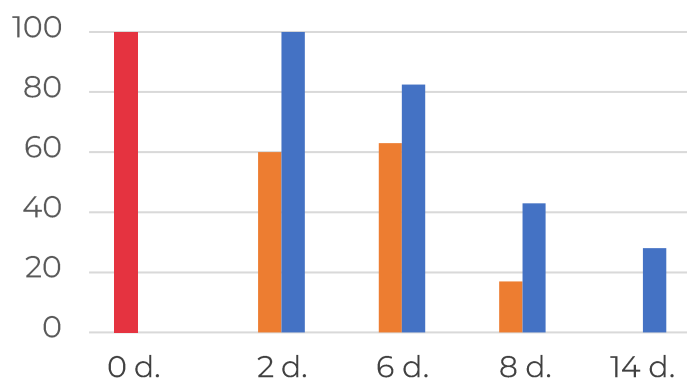
Weight loss (%)



Berries kept in the classical cold room were not evaluated at 14 days of storage as they were too damaged.

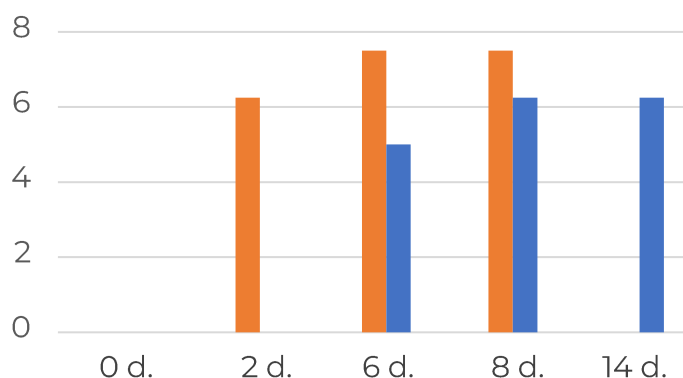
Freshness

(% firm/unwilted berries)



Sanitary quality

(% mouldy berries)

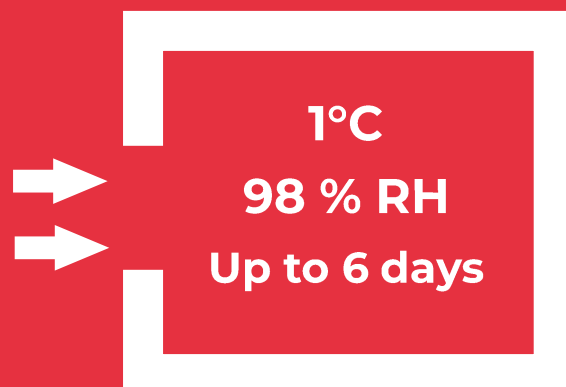


CONCLUSIONS

Storage with the HDCold® technology has made it possible to:

- ✓ Reduce weight loss
- ✓ Maintain the freshness of berries
 - ✓ Maintain their shininess
 - ✓ Up to 40% difference with the standard cold room
- ✓ Limit mold development
- ✓ Keep similar level of sugar content and acidity

RECOMMENDATIONS



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