Raspberry

2021

AIM OF THE STUDY:

WHAT IS THE IMPACT OF HDCOLD® TEHCNOLOGY 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)*

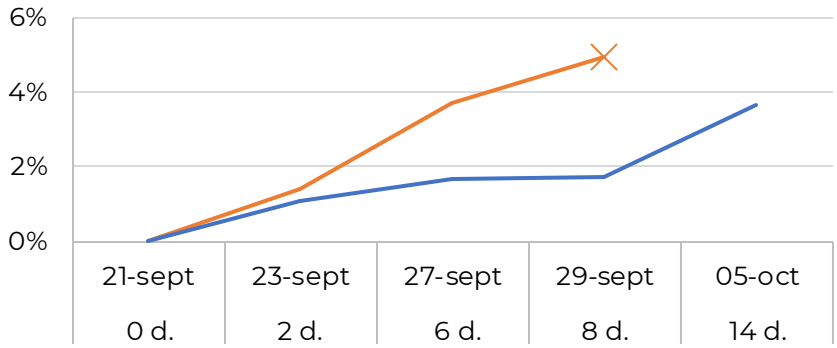
Pour la conservation du vivant.

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)**

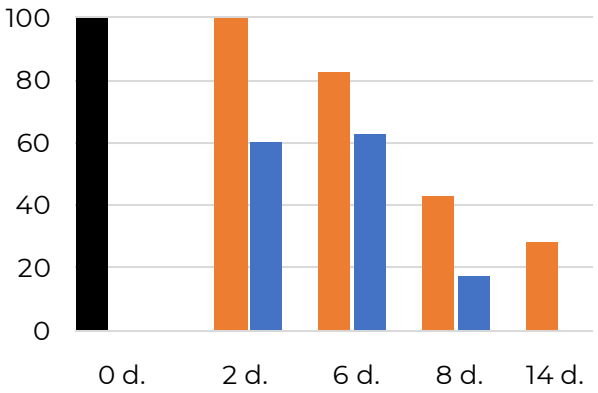
Weight loss (%)



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

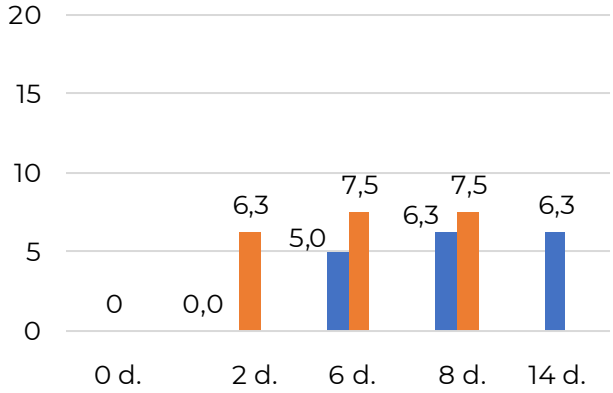
Freshness

(% 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

1°C
98 % RH
Up to 6 days

D P K L

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