

Supplementary material

Table S1. Total aerobic mesophylls (TAM) and yeasts and molds (Y&M) counts (log CFU g⁻¹) in frozen strawberries. Values are the mean of 3 repetitions \pm standard deviation. Different lowercase letters show statistically significant differences ($p < 0.05$) between gas compositions in the same day, and capital letters show statistically significant differences ($p < 0.05$) during time within the same treatment analyzed with Tukey's test. Underlined values show statistically significant differences ($p < 0.05$) between the three steps (initial, after WUVPA, and frozen-thawed at M0), analyzed with Tukey's test.

	Packaging	Initial	After WUVPA ¹	M0	M3	M6	M12
TAM	MAP ²	2.5 \pm 0.1	2.1 \pm 0.3	<u>1.2 \pm 0.3</u> ^{aA}	1.2 \pm 0.2 ^{aA}	1.2 \pm 0.3 ^{aA}	1.4 \pm 0.4 ^{aA}
(log CFU g ⁻¹)	Air			<u>1.5 \pm 0.3</u> ^{aA}	1.4 \pm 0.2 ^{aA}	1.2 \pm 0.4 ^{aA}	1.1 \pm 0.2 ^{aA}
Y&M	MAP ²	2.5 \pm 0.2	1.8 \pm 0.2	<u>1.4 \pm 0.2</u> ^{aA}	1.4 \pm 0.1 ^{aA}	1.4 \pm 0.2 ^{aA}	1.3 \pm 0.1 ^{aA}
(log CFU g ⁻¹)	Air			<u>1.6 \pm 0.3</u> ^{aA}	1.4 \pm 0.1 ^{aA}	1.5 \pm 0.3 ^{aA}	1.3 \pm 0.1 ^{aA}

¹ WUVPA, water-assisted ultraviolet-C light combined with peracetic acid at 40 mg L⁻¹. ² MAP, modified atmosphere packaging.

Table S2. Graphical representation of the strawberries (whole and fresh-cut) after the respective treatment over the days.

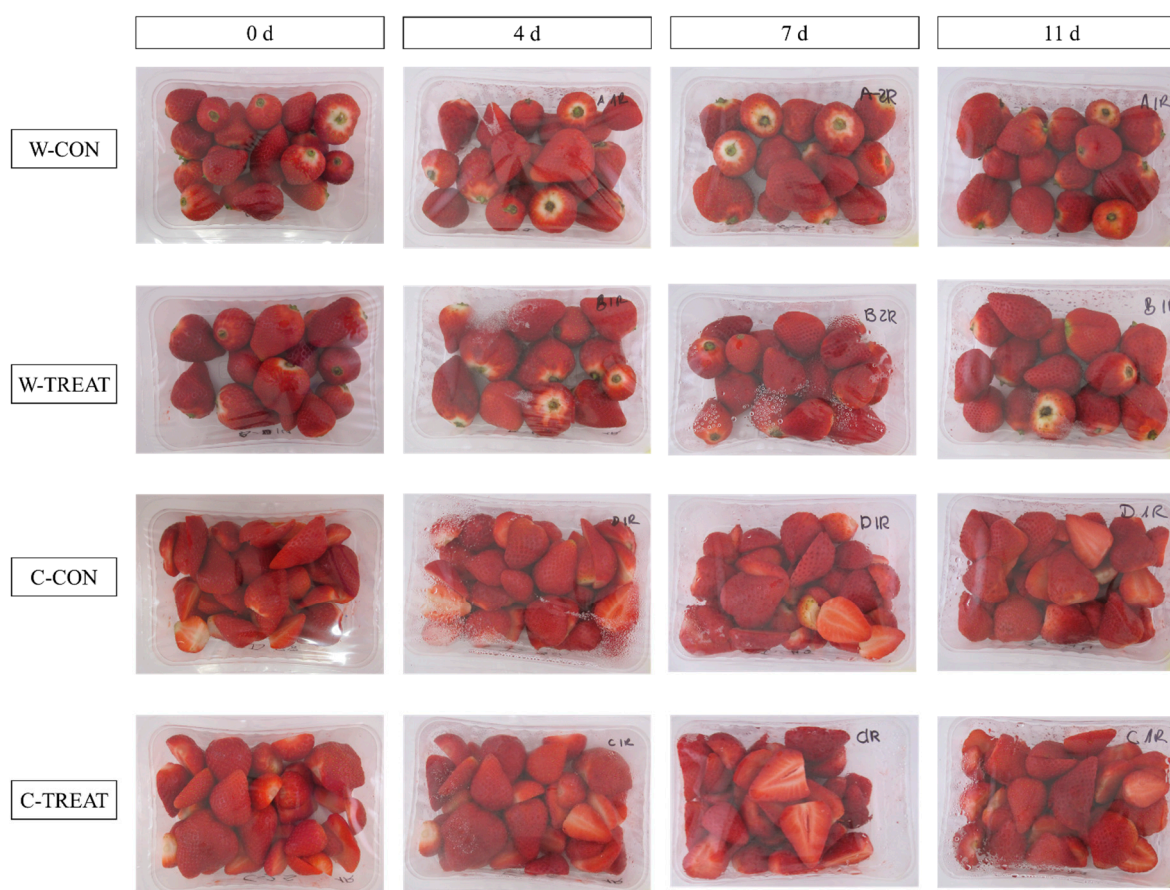


Table S3. Graphical representation of the strawberries (frozen) after their respective treatment.



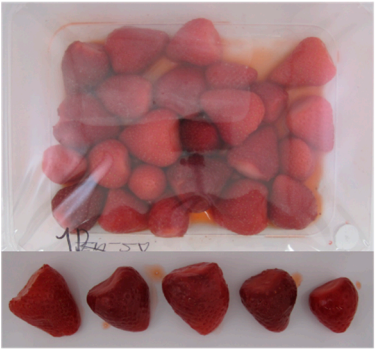
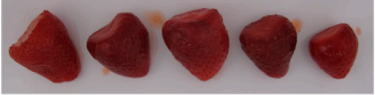


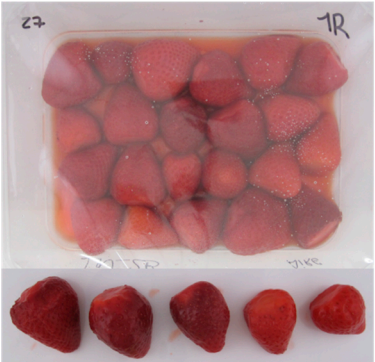

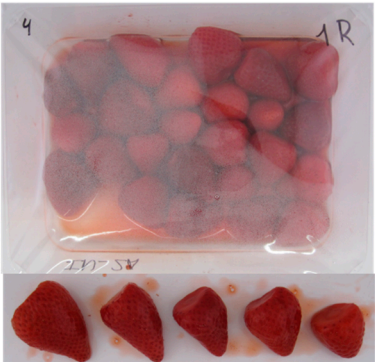
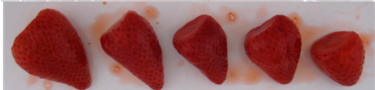
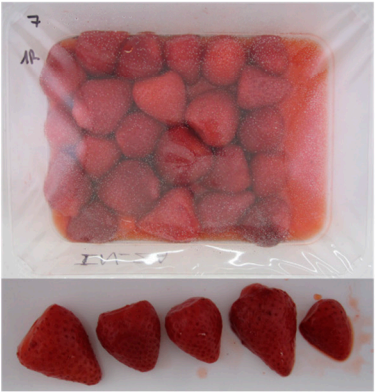



	Air	MAP
Frozen		
Thawed (24 h)	 	 
Thawed (48 h)	 	 
Thawed (72 h)	 	 

Table S4. Gas composition (O₂ and CO₂) throughout the shelf-life of whole and cut strawberries.

	O ₂ (%)		
	4 d	7 d	11 d
W-CON	14.1 ± 1.0 a	12.3 ± 0.2 ab	10.6 ± 1.7 b
W-TREAT	12.8 ± 1.1a	12.7 ± 0.5a	10.8 ± 1.3 a
C-CON	12.7 ± 1.1a	12.9 ± 0.7 a	12.2 ± 0.4 a
C-TREAT	12.2 ± 0.2a	12.3 ± 1.0 a	10.9 ± 0.6 b
	CO ₂ (%)		
	4 d	7 d	11 d
W-CON	8.3 ± 1.1 b	10.5 ± 0.3 ab	13.1 ± 2.4 a
W-TREAT	9.8 ± 1.3a	9.9 ± 0.7 a	12.5 ± 1.9 a
C-CON	9.9 ± 1.3a	10.0 ± 0.9 a	11.1 ± 0.4 a
C-TREAT	10.3 ± 0.4 b	10.6 ± 1.3 b	12.5 ± 0.8 a

Table S5. Average respiration rate (RR) of different strawberry formats (whole and fresh-cut) throughout the shelf-life (11 d).

	O ₂	CO ₂	RR
W-CON	26.7 ± 0.4	7.2 ± 0.7	Moderate
W-TREAT	27.4 ± 0.2	8.0 ± 0.5	Moderate
C-CON	26.6 ± 0.2	7.4 ± 0.6	Moderate
C-TREAT	26.3 ± 0.2	7.8 ± 0.1	Moderate

Table S6. Weight loss of the different strawberry formats (whole and cut) throughout the shelf-life of the product.

	4 d	7 d	11 d
W-CON	1.70 ± 0.14 aA	3.02 ± 0.52 aB	3.15 ± 0.15 aB
W-TREAT	2.59 ± 0.26 bA	2.45 ± 0.52 aA	2.82 ± 0.33 aA
C-CON	2.35 ± 0.56 abA	2.31 ± 0.02 aA	2.51 ± 0.20 aA
C-TREAT	2.37 ± 0.16 abA	2.35 ± 0.15 aA	3.16 ± 0.32 aB