

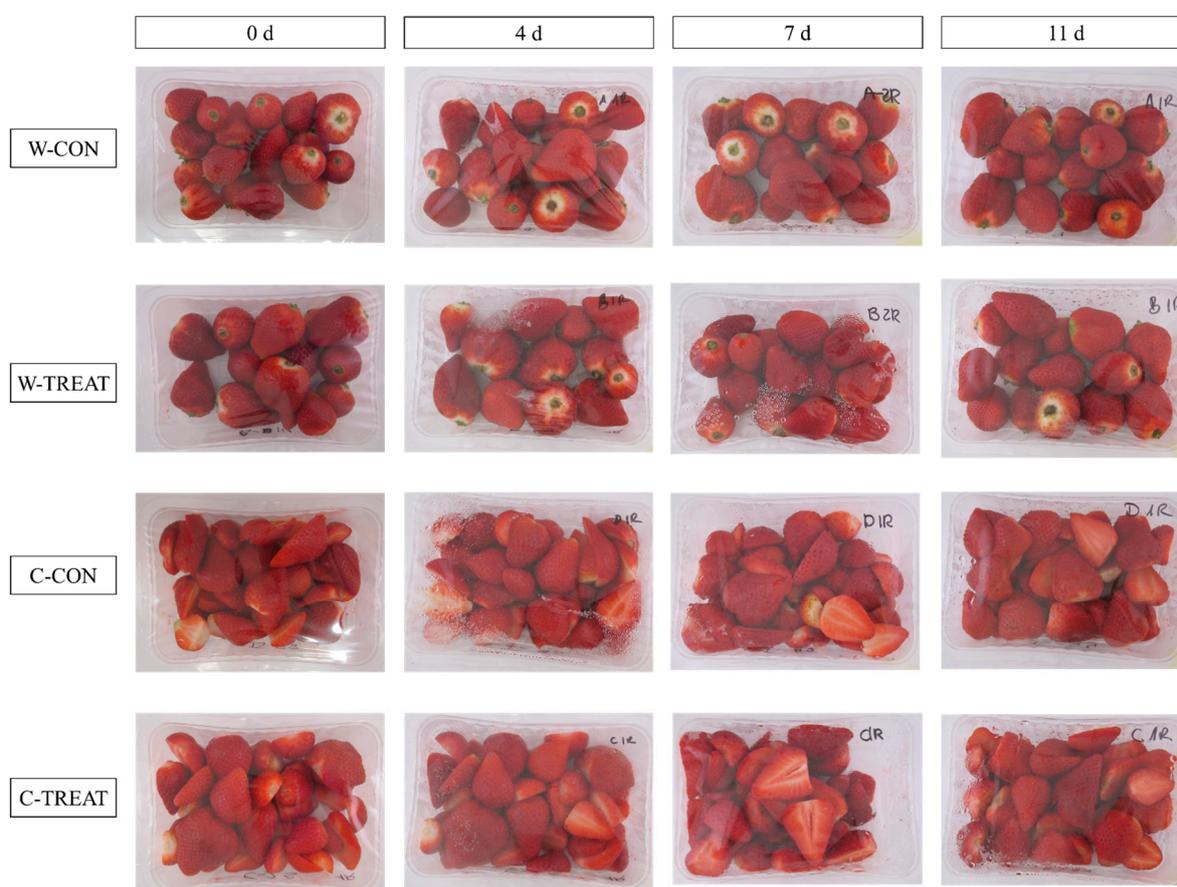
## Supplementary material

**Table S1.** Total aerobic mesophylls (TAM) and yeasts and molds (Y&M) counts (log CFU g<sup>-1</sup>) in frozen strawberries. Values are the mean of 3 repetitions ± 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 <sup>1</sup>	M0	M3	M6	M12
TAM (log CFU g <sup>-1</sup> )	MAP <sup>2</sup>	2.5 ± 0.1	2.1 ± 0.3	<u>1.2 ± 0.3</u> <sup>aA</sup>	1.2 ± 0.2 <sup>aA</sup>	1.2 ± 0.3 <sup>aA</sup>	1.4 ± 0.4 <sup>aA</sup>
	Air			<u>1.5 ± 0.3</u> <sup>aA</sup>	1.4 ± 0.2 <sup>aA</sup>	1.2 ± 0.4 <sup>aA</sup>	1.1 ± 0.2 <sup>aA</sup>
Y&M (log CFU g <sup>-1</sup> )	MAP <sup>2</sup>	2.5 ± 0.2	1.8 ± 0.2	<u>1.4 ± 0.2</u> <sup>aA</sup>	1.4 ± 0.1 <sup>aA</sup>	1.4 ± 0.2 <sup>aA</sup>	1.3 ± 0.1 <sup>aA</sup>
	Air			<u>1.6 ± 0.3</u> <sup>aA</sup>	1.4 ± 0.1 <sup>aA</sup>	1.5 ± 0.3 <sup>aA</sup>	1.3 ± 0.1 <sup>aA</sup>

<sup>1</sup> WUVPA, water-assisted ultraviolet-C light combined with peracetic acid at 40 mg L<sup>-1</sup>. <sup>2</sup> 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 (O<sub>2</sub> and CO<sub>2</sub>) throughout the shelf-life of whole and cut strawberries.

	<b>O<sub>2</sub> (%)</b>		
	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
<b>CO<sub>2</sub> (%)</b>			
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).

	<b>O<sub>2</sub></b>	<b>CO<sub>2</sub></b>	<b>RR</b>
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.

	<b>4 d</b>	<b>7 d</b>	<b>11 d</b>
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