APPENDIX

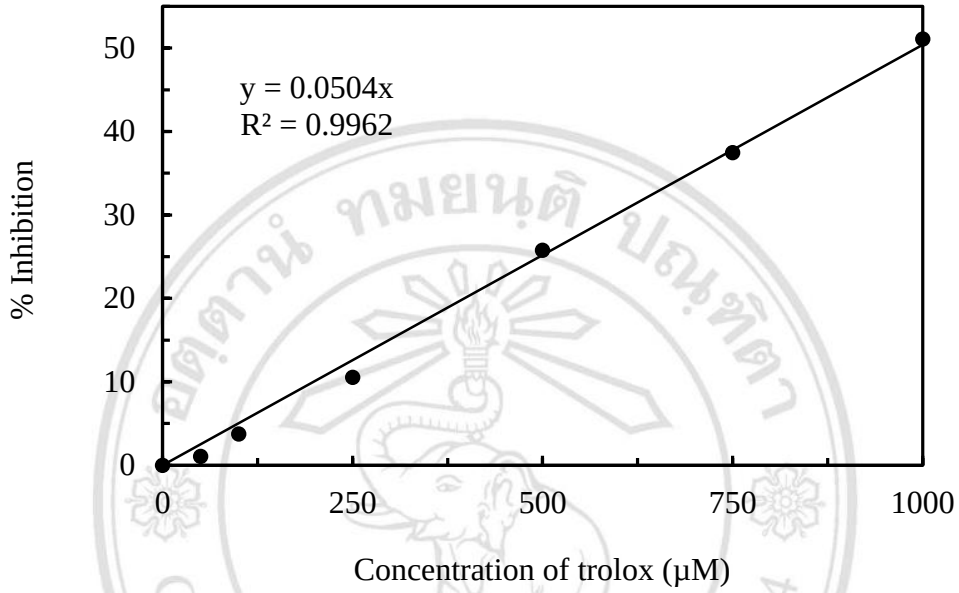

Figure 1 Linearity between percentages of ABTS bleaching color of Trolox concentration

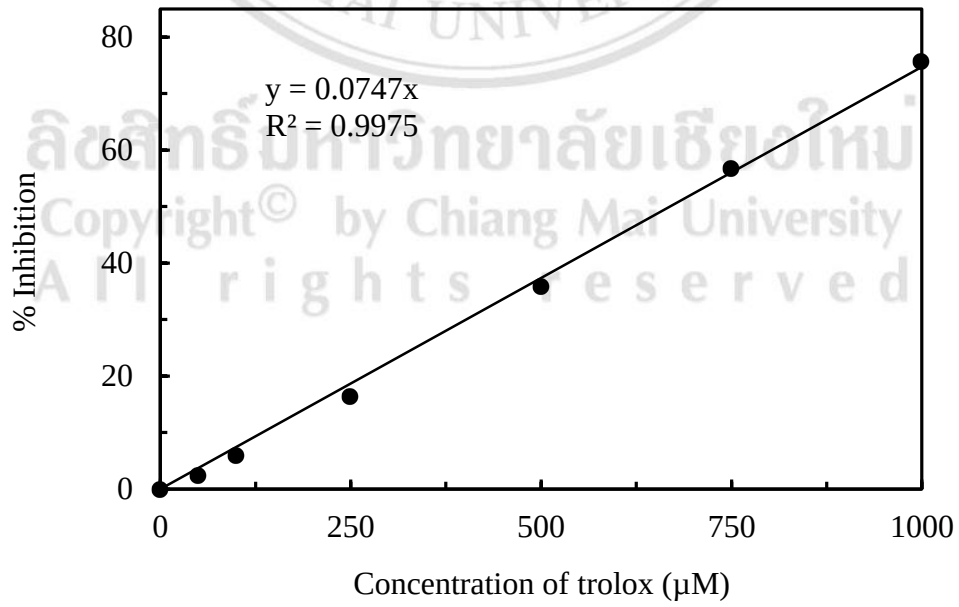

Figure 2 Linearity between percentages of DPPH bleaching color of Trolox concentration

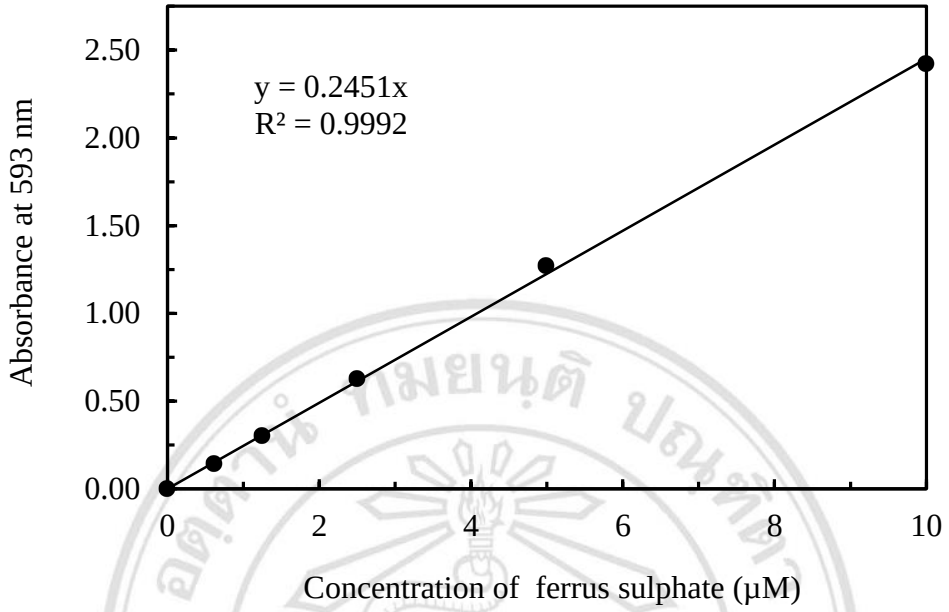

Figure 3 Linearity between absorbance at 593 nm of ferrus sulphate concentration

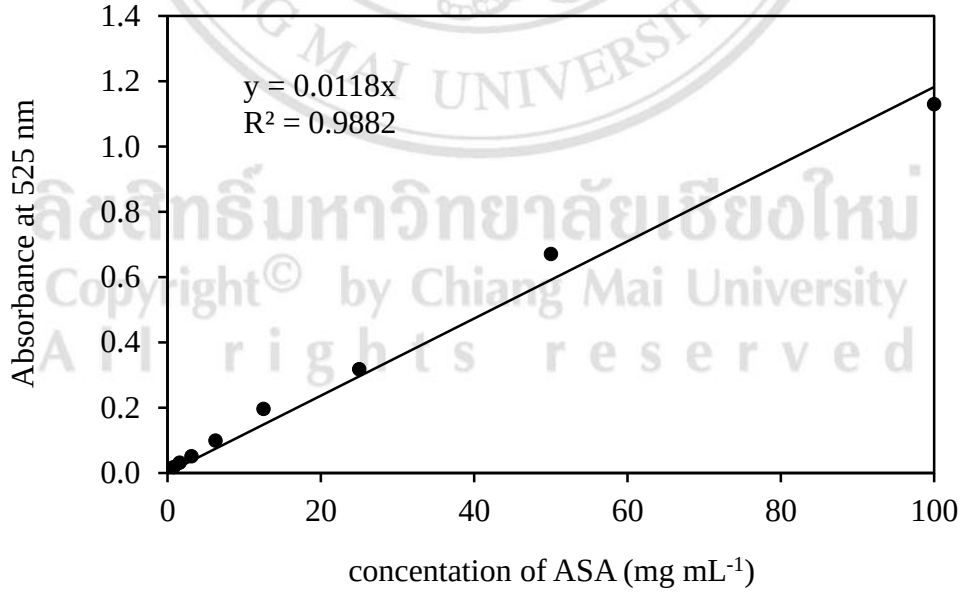

Figure 4 Linearity between absorbance at 525 nm of ascorbate concentration

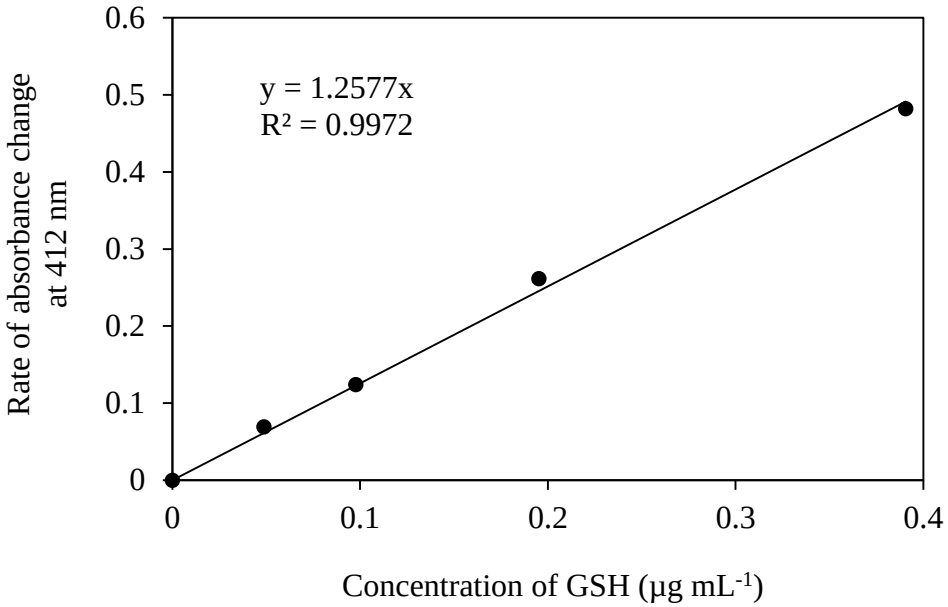

Figure 5 Linearity between rate of absorbance change at 412 nm of GSH concentration

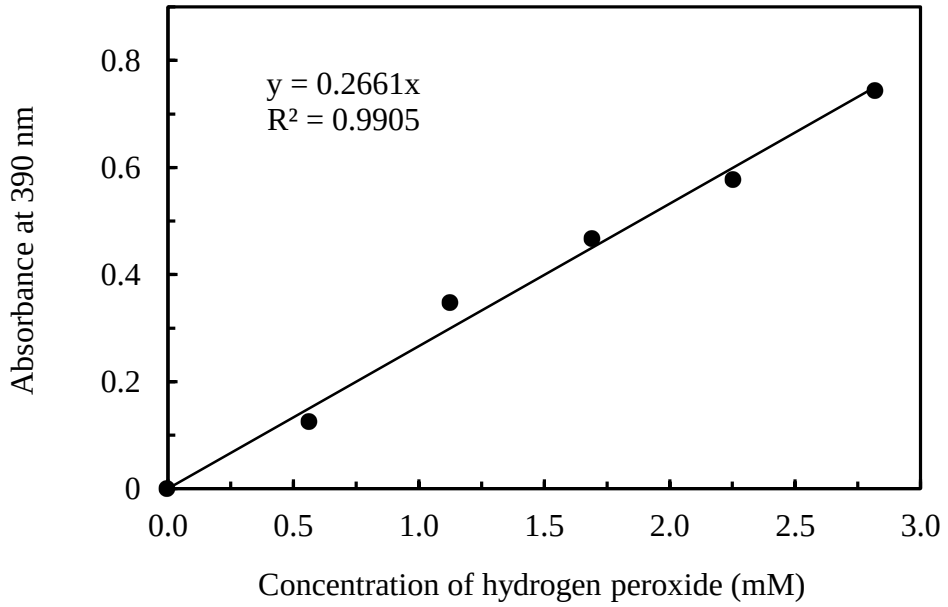

Figure 6 Linearity between absorbance at 390 nm of hydrogen peroxide concentration

Table 1 Effects of exogenous ATP on antioxidant capacity assayed by ABTS method of 'Daw' longan pericarp during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	ABTS radical scavenging capacity (μmol Trolox g^{-1} FW)			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	73.57±1.83 a	73.57±1.83 a	73.57±1.83 a	73.57±1.83 a
0-AD	73.57±1.83 b	81.56±7.02 ab	87.45±5.76 a	90.62±5.50 a
1	75.26±3.07 b	85.15±4.02 ab	91.11±4.62 a	94.31±2.61 a
2	64.51±7.03 b	70.68±6.36 b	87.73±6.37 a	89.33±6.44 a
3	58.83±5.83 b	60.27±6.64 b	75.10±6.61 a	79.75±6.29 a
4	47.39±3.10 b	49.63±9.52 b	66.89±6.81 a	63.57±1.79 a
5	39.53±9.19 a	46.39±8.06 a	54.29±10.46 a	58.29±9.45 a
6	38.68±4.49 a	41.38±9.03 a	51.14±5.54 a	49.06±7.94 a
7	37.12±8.35 a	40.31±6.88 a	53.34±3.39 a	50.51±7.10 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 2 Effects of exogenous ATP on antioxidant capacity assayed by DPPH method of 'Daw' longan pericarp during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	DPPH radical scavenging capacity (μmol Trolox g^{-1} FW)			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	76.93±2.22 a	76.93±2.22 a	76.93±2.22 a	76.93±2.22 a
0-AD	76.93±2.22 b	80.45±2.91 b	87.05±7.17 a	88.96±2.93 a
1	66.95±4.44 c	78.30±3.05 b	89.40±6.40 a	89.71±4.21 a
2	57.59±3.23 c	63.79±2.04 b	76.23±3.19 a	80.12±4.25 a
3	50.24±3.45 c	56.00±3.01 b	66.27±4.39 a	67.83±3.87 a
4	49.62±4.27 b	50.40±3.10 b	58.90±3.41 a	60.51±3.05 a
5	42.81±5.22 b	45.35±4.14 ab	49.30±3.51 a	53.47±5.96 a
6	40.93±1.45 b	43.30±1.92 b	51.29±2.45 a	54.27±3.64 a
7	39.41±4.28 b	39.86±3.04 b	49.84±3.43 a	51.50±2.65 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 3 Effects of exogenous ATP on antioxidant capacity assayed by FRAP method of 'Daw' longan pericarp during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	Ferric reducing antioxidant power (μmol Fe^{2+} g^{-1} FW)			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	1.61±0.06 a	1.61±0.06 a	1.61±0.06 a	1.61±0.06 a
0-AD	1.61±0.06 c	1.71±0.02 b	1.89±0.05 a	1.91±0.05 a
1	1.62±0.07 b	1.74±0.07 b	1.91±0.03 a	1.93±0.04 a
2	1.56±0.02 b	1.59±0.03 b	1.71±0.05 a	1.78±0.06 a
3	1.39±0.07 b	1.48±0.07 b	1.65±0.04 a	1.69±0.03 a
4	1.30±0.07 b	1.29±0.04 b	1.52±0.09 a	1.50±0.07 a
5	1.05±0.03 a	1.11±0.03 a	1.17±0.07 a	1.16±0.02 a
6	0.92±0.02 a	0.86±0.02 a	0.93±0.03 a	0.93±0.02 a
7	0.70±0.03 a	0.78±0.04 a	0.81±0.04 a	0.79±0.01 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 4 Effects of exogenous ATP on browning index of 'Daw' longan pericarp during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	Browning index			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a
0-AD	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a
1	2.60±0.23 a	2.20±0.16 a	1.60±0.15 b	1.50±0.25 b
2	5.00±0.00 a	4.50±0.26 b	2.33±0.37 c	1.80±0.16 c
3	5.00±0.00 a	5.00±0.00 a	2.70±0.16 b	2.45±0.10 b
4	5.00±0.00 a	5.00±0.00 a	3.00±0.00 b	2.80±0.17 b
5	5.00±0.00 a	5.00±0.00 a	4.50±0.16 b	4.40±0.15 b
6	5.00±0.00 a	5.00±0.00 a	5.00±0.00 a	5.00±0.00 a
7	5.00±0.00 a	5.00±0.00 a	5.00±0.00 a	5.00±0.00 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 5 Effects of exogenous ATP on L* value of 'Daw' pericarp during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	L* value			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	30.76±0.18 a	30.76±0.18 a	30.76±0.18 a	30.76±0.18 a
0-AD	30.77±0.11 a	30.42±0.22 a	30.52±0.24 a	30.65±0.15 a
1	29.14±0.14 ab	28.91±0.13 b	29.85±0.22 a	30.11±0.22 a
2	28.71±0.20 b	28.63±0.21 b	29.45±0.14 a	29.72±0.21 a
3	27.77±0.21 c	28.35±0.20 b	29.25±0.22 a	29.69±0.16 a
4	26.82±0.20 c	27.50±0.21 b	27.72±0.20 b	28.71±0.18 a
5	26.98±0.16 c	26.75±0.15 c	27.31±0.13 b	27.99±0.21 a
6	26.85±0.19 ab	26.38±0.23 b	27.12±0.18 a	27.38±0.10 a
7	26.65±0.13 a	26.01±0.16 b	26.43±0.20 a	26.94±0.21 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 6 Effects of exogenous ATP on disease index of 'Daw' longan during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	Disease index			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
0-AD	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
1	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
2	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
3	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
4	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
5	0.30±0.15 a	0.25±0.10 a	0.10±0.00 b	0.10±0.05 b
6	1.25±0.23 a	0.98±0.30 a	0.38±0.20 b	0.46±0.15 b
7	2.60±0.20 a	1.32±0.15 b	0.85±0.15 c	0.65±0.30 c

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 7 Effects of exogenous ATP on overall quality acceptance of 'Daw' longan during storage at 25±1°C (BD, before dipping; AD, after dipping)

Storage time (days)	Overall quality acceptance			
	Control	0.5 mM ATP	1 mM ATP	2 mM ATP
0-BD	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a
0-AD	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a
1	7.33±0.58 b	8.33±0.58 a	9.00±0.00 a	9.00±0.00 a
2	6.00±0.00 c	7.00±1.00 bc	9.00±0.00 a	7.67±0.58 b
3	4.00±1.00 b	4.33±1.15 b	6.67±0.58 a	6.33±0.58 a
4	3.67±1.15 b	3.33±0.58 b	5.33±0.58 a	5.33±0.58 a
5	3.00±1.00 ab	2.33±0.58 b	4.00±0.00 a	4.00±1.00 a
6	1.33±0.58 b	1.67±0.58 ab	3.00±1.00 a	2.33±0.58 ab
7	1.00±0.00 b	1.00±0.00 b	2.67±1.53 a	2.33±0.58 ab

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 8 Effects of ClO_2 fumigation on ATP content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	ATP content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	50.77±5.82 a	50.77±5.82 a	50.77±5.82 a	50.77±5.82 a
0-AF	50.77±5.82 b	56.97±2.90 b	65.60±3.48 a	66.85±1.74 a
1	42.05±3.95 c	57.63±1.73 b	68.71±6.62 a	73.40±3.11 a
2	42.63±0.52 c	52.64±5.72 b	62.02±9.71 a	63.75±4.72 a
3	32.86±0.90 d	45.57±3.15 c	52.21±4.01 b	58.76±4.72 a
4	24.43±1.17 b	36.48±4.41 a	43.16±3.82 a	42.11±6.00 a
5	22.33±1.40 c	34.84±2.98 b	42.02±2.49 a	41.74±2.68 a
6	21.47±2.67 b	28.72±6.90 a	31.79±1.66 a	32.29±1.44 a
7	17.01±3.88 a	17.49±2.11 a	32.29±1.44 a	18.78±1.21 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 9 Effects of ClO_2 fumigation on ADP content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	ADP content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	18.24±1.24 a	18.24±1.24 a	18.24±1.24 a	18.24±1.24 a
0-AF	18.24±1.24 a	21.10±1.70 a	22.68±0.51 a	25.73±2.37 a
1	22.28±2.35 a	18.57±1.83 a	19.64±2.85 a	26.91±0.65 a
2	14.39±2.28 a	18.46±5.43 a	13.99±2.53 a	14.35±3.35 a
3	18.14±3.70 a	17.19±3.21 a	18.84±4.68 a	14.70±5.06 a
4	20.07±2.32 a	21.17±2.13 a	17.71±2.08 a	17.47±2.22 a
5	12.46±2.25 a	13.28±1.50 a	11.34±1.45 a	13.22±1.66 a
6	7.65±2.12 a	9.10±5.23 a	10.45±0.64 a	9.10±3.55 a
7	5.11±1.04 a	5.27±1.25 a	6.47±1.27 a	7.18±0.28 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 10 Effects of ClO_2 fumigation on AMP content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	AMP content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	18.24±1.24 a	18.24±1.24 a	18.24±1.24 a	18.24±1.24 a
0-AF	24.61±3.10 a	13.80±3.19 b	14.00±2.17 b	15.81±3.46 b
1	29.03±3.44 a	15.24±1.74 b	13.98±3.53 b	12.51±2.53 b
2	31.65±3.52 a	21.61±1.78 b	18.45±2.19 b	18.22±3.83 b
3	35.04±1.99 a	23.66±1.66 b	21.85±1.59 b	22.29±1.87 b
4	38.39±1.59 a	24.82±4.19 b	23.84±3.21 b	20.63±4.32 b
5	44.51±1.03 a	30.33±4.69 b	26.85±1.59 b	27.29±1.87 b
6	44.29±1.02 a	31.96±2.81 b	29.64±1.92 b	29.78±0.98 b
7	46.03±3.95 a	39.99±1.02 b	40.24±0.65 b	39.23±5.08 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 11 Effects of ClO_2 fumigation on energy charge of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Energy charge			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.64±0.03 a	0.64±0.03 a	0.64±0.03 a	0.64±0.03 a
0-AF	0.64±0.03 b	0.73±0.01 b	0.75±0.02 a	0.74±0.02 a
1	0.57±0.03 c	0.73±0.02 b	0.77±0.04 a	0.77±0.01 a
2	0.56±0.02 c	0.67±0.04 b	0.73±0.02 a	0.74±0.04 a
3	0.49±0.01 d	0.63±0.02 c	0.66±0.02 b	0.69±0.01 a
4	0.42±0.01 b	0.57±0.05 a	0.61±0.04 a	0.63±0.05 a
5	0.36±0.01 c	0.53±0.05 b	0.59±0.01 a	0.59±0.01 a
6	0.34±0.03 b	0.48±0.07 a	0.52±0.03 a	0.52±0.01 a
7	0.29±0.03 a	0.32±0.02 a	0.34±0.01 a	0.34±0.04 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 12 Effects of ClO_2 fumigation on SDH activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	SDH activity (unit mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.240±0.033 a	0.240±0.033 a	0.240±0.033 a	0.240±0.033 a
0-AF	0.240±0.033 b	0.338±0.048 a	0.378±0.007 a	0.344±0.042 a
1	0.142±0.027 c	0.364±0.042 b	0.494±0.055 a	0.415±0.065 b
2	0.131±0.017 a	0.301±0.035 a	0.373±0.029 a	0.311±0.025 a
3	0.128±0.019 c	0.211±0.026 b	0.364±0.038 a	0.267±0.031 b
4	0.083±0.051 b	0.122±0.021 a	0.203±0.027 a	0.192±0.021 b
5	0.077±0.027 a	0.105±0.060 a	0.118±0.037 a	0.103±0.050 a
6	0.068±0.022 a	0.115±0.058 a	0.116±0.063 a	0.089±0.038 a
7	0.058±0.027 a	0.105±0.040 a	0.101±0.040 a	0.087±0.042 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 13 Effects of ClO_2 fumigation on CCO activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	CCO activity (unit mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.381±0.056 a	0.381±0.056 a	0.381±0.056 a	0.381±0.056 a
0-AF	0.381±0.056 b	0.638±0.075 a	0.745±0.104 a	0.813±0.133 a
1	0.501±0.059 c	0.650±0.037 b	0.703±0.029 a	0.722±0.032 a
2	0.412±0.103 c	0.569±0.070 b	0.726±0.094 a	0.728±0.109 a
3	0.369±0.090 c	0.589±0.042 b	0.716±0.158 a	0.690±0.079 a
4	0.266±0.022 c	0.449±0.076 b	0.593±0.059 a	0.546±0.060 a
5	0.246±0.035 d	0.381±0.046 c	0.442±0.058 b	0.515±0.050 a
6	0.172±0.037 c	0.265±0.038 b	0.309±0.076 b	0.366±0.028 a
7	0.151±0.041 b	0.299±0.056 a	0.316±0.050 a	0.328±0.052 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 14 Effects of ClO_2 fumigation on NAD^+ content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	NAD^+ content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	28.92±0.11 a	28.92±0.11 a	28.92±0.11 a	28.92±0.11 a
0-AF	28.92±0.11 c	40.28±0.84 b	43.47±0.53 a	46.05±3.62 a
1	28.25±0.47 d	41.81±0.65 c	50.23±0.09 b	53.38±0.10 a
2	30.18±0.07 c	47.65±0.90 b	56.50±0.52 a	56.17±0.69 a
3	32.18±0.49 d	51.19±0.08 c	59.90±0.22 b	61.10±0.72 a
4	39.05±0.68 d	63.16±0.28 c	73.20±0.81 b	74.50±0.63 a
5	40.43±0.49 c	62.54±2.16 b	68.74±1.17 a	68.35±0.86 a
6	40.85±1.26 c	62.59±0.43 a	62.85±0.94 a	56.80±2.27 b
7	39.83±0.68 c	50.73±0.39 b	52.16±1.01 a	53.02±0.68 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 15 Effects of ClO_2 fumigation on NADH content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	NADH content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	32.85±0.86 a	32.85±0.86 a	32.85±0.86 a	32.85±0.86 a
0-AF	32.85±0.86 b	37.02±1.11 a	37.18±1.14 a	39.21±3.22 a
1	35.73±0.14 c	38.77±0.33 b	39.44±0.51 b	40.80±0.79 a
2	36.58±0.31 c	43.94±0.83 b	46.11±1.25 a	45.54±1.42 a
3	39.27±0.16 c	46.14±0.43 b	49.47±0.69 a	49.29±0.18 a
4	48.27±0.51 d	49.94±0.40 c	53.09±0.44 b	54.44±0.91 a
5	48.47±1.09 b	48.75±0.54 b	54.39±1.45 a	54.16±0.57 a
6	47.28±0.67 c	50.86±0.36 b	56.06±1.01 a	56.38±1.00 a
7	46.91±0.45 c	48.97±0.69 b	51.56±0.56 a	50.91±0.58 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 16 Effects of ClO_2 fumigation on NAD^+/NADH ratio of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	NAD^+/NADH ratio			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.88±0.02 a	0.88±0.02 a	0.88±0.02 a	0.88±0.02 a
0-AF	0.88±0.02 b	1.09±0.03 a	1.17±0.03 a	1.17±0.08 a
1	0.79±0.01 d	1.08±0.02 c	1.27±0.02 b	1.31±0.02 a
2	0.83±0.01 c	1.08±0.00 b	1.23±0.04 a	1.23±0.04 a
3	0.82±0.02 c	1.11±0.01 b	1.21±0.02 a	1.24±0.02 a
4	0.81±0.02 c	1.26±0.02 b	1.38±0.01 a	1.37±0.02 a
5	0.83±0.01 b	1.28±0.05 a	1.26±0.05 a	1.26±0.02 a
6	0.86±0.03 d	1.23±0.00 a	1.12±0.03 b	1.01±0.03 c
7	0.85±0.01 b	1.04±0.01 a	1.01±0.03 a	1.04±0.02 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 17 Effects of ClO_2 fumigation on Q content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Q content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	4.24±0.27 a	4.24±0.27 a	4.24±0.27 a	4.24±0.27 a
0-AF	4.24±0.27 b	5.04±0.20 b	6.46±0.75 a	9.83±0.39 a
1	4.60±0.21 d	6.44±0.14 c	8.64±0.04 b	9.63±0.12 a
2	2.68±0.09 d	6.09±0.13 c	12.95±0.08 b	14.35±0.57 a
3	3.69±0.10 d	6.10±0.07 c	7.29±0.03 b	11.94±0.09 a
4	4.24±0.14 d	6.15±0.32 c	10.10±0.41 b	11.58±0.58 a
5	4.81±0.29 d	9.90±0.36 c	13.00±0.44 b	15.28±0.26 a
6	4.13±0.43 d	5.32±0.12 c	12.33±0.18 b	16.23±0.77 a
7	5.49±0.49 d	7.41±0.10 c	13.94±0.27 b	15.50±0.29 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 18 Effects of ClO_2 fumigation on QH_2 content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	QH_2 content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	75.75±11.85 a	75.75±11.85 a	75.75±11.85 a	75.75±11.85 a
0-AF	75.75±11.85 c	93.05±5.54 b	154.90±3.64 a	158.42±3.58 a
1	105.69±0.05 d	146.40±1.66 c	158.29±1.42 b	177.33±1.75 a
2	106.20±2.12 d	114.73±1.82 c	173.74±1.89 b	211.02±1.14 a
3	92.30±0.93 d	108.88±0.74 c	117.78±0.31 b	146.28±0.03 a
4	43.74±3.80 d	62.60±1.23 c	69.67±1.25 b	74.29±2.78 a
5	40.26±1.90 d	62.72±2.11 c	69.09±2.14 b	79.35±0.92 a
6	36.02±0.60 c	59.08±1.96 b	65.96±0.67 a	63.71±0.85 a
7	40.15±0.77 d	54.77±0.64 c	61.38±0.66 b	73.73±7.40 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 19 Effects of ClO_2 fumigation on Q/QH_2 ratio of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Q/QH_2 ratio			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.057±0.006 a	0.057±0.006 a	0.057±0.006 a	0.057±0.006 a
0-AF	0.057±0.006 b	0.054±0.004 b	0.042±0.004 c	0.063±0.001 a
1	0.044±0.002 b	0.044±0.000 b	0.055±0.001 a	0.055±0.001 a
2	0.025±0.001 c	0.053±0.001 b	0.075±0.001 a	0.068±0.002 a
3	0.040±0.001 c	0.056±0.001 b	0.062±0.000 b	0.082±0.001 a
4	0.098±0.011 b	0.098±0.005 b	0.145±0.004 a	0.152±0.008 a
5	0.120±0.007 c	0.158±0.009 b	0.188±0.002 a	0.191±0.002 a
6	0.115±0.014 c	0.090±0.003 d	0.187±0.002 b	0.253±0.009 a
7	0.137±0.012 c	0.135±0.003 c	0.227±0.006 a	0.212±0.025 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 20 Effects of ClO_2 fumigation on browning index of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Browning index			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a
0-AF	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a	1.00±0.00 a
1	2.30±0.13 a	1.70±0.15 b	1.20±0.15 c	1.20±0.13 c
2	4.40±0.00 a	2.50±0.17 b	1.30±0.16 c	1.30±0.15 c
3	5.00±0.00 a	3.00±0.00 b	1.80±0.10 c	2.00±0.00 c
4	5.00±0.00 a	3.50±0.17 b	2.20±0.17 c	2.40±0.16 c
5	5.00±0.00 a	4.30±0.15 b	2.70±0.00 c	3.00±0.00 c
6	5.00±0.00 a	4.60±0.16 a	3.20±0.16 b	3.40±0.16 b
7	5.00±0.00 a	5.00±0.00 a	4.50±0.16 b	4.50±0.17 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 21 Effects of ClO_2 fumigation on L* value of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	L* value			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	29.16±0.11 a	29.16±0.11 a	29.16±0.11 a	29.16±0.11 a
0-AF	29.16±0.11 c	31.04±0.24 b	32.71±0.15 a	33.04±0.18 a
1	28.50±0.14 c	30.74±0.22 b	31.61±0.22 a	31.77±0.14 a
2	28.05±0.20 c	29.92±0.14 b	31.20±0.21 a	31.49±0.22 a
3	27.06±0.21 c	29.71±0.22 b	31.17±0.16 a	31.28±0.22 a
4	26.06±0.20 c	28.11±0.20 b	29.15±0.18 a	29.32±0.17 a
5	24.44±0.16 c	25.68±0.13 b	28.39±0.21 a	28.70±0.23 a
6	23.99±0.19 b	24.47±0.18 b	25.75±0.10 a	25.89±0.11 a
7	23.78±0.13 c	24.44±0.20 b	25.29±0.21 a	25.47±0.22 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 22 Effects of ClO_2 fumigation on disease index of 'Daw' longan during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Disease index			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
0-AF	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
1	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
2	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
3	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
4	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
5	0.63±0.30 a	0.00±0.00 a	0.00±0.00 a	0.00±0.00 a
6	1.20±0.30 a	0.40±0.00 b	0.20±0.30 b	0.20±0.30 b
7	3.30±0.15 a	1.00±0.30 b	0.50±0.00 c	0.40±0.20 c

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 23 Effects of ClO_2 fumigation on overall quality acceptance of 'Daw' longan during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	Overall quality acceptance			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a	9.00±0.00 a
0-AF	7.67±0.58 b	9.00±0.00 a	9.00±0.00 a	3.67±1.15 c
1	6.33±0.58 b	7.67±1.15 a	9.00±0.00 a	2.33±1.15 c
2	5.33±0.58 b	7.00±1.00 a	7.67±0.58 a	1.67±0.58 c
3	3.33±0.58 c	5.33±0.58 b	6.33±0.58 a	1.67±0.58 d
4	3.00±0.00 b	4.67±0.58 a	5.33±0.58 a	1.00±0.00 c
5	2.67±0.58 b	3.67±0.58 ab	5.00±1.00 a	1.00±0.00 c
6	1.00±0.00 b	3.00±1.00 a	3.67±0.58 a	1.00±0.00 b
7	1.00±0.00 b	2.33±1.53 ab	3.00±1.00 a	1.00±0.00 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 24 Effects of ClO_2 fumigation on ASA content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	ASA content (mg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	25.56±0.65 a	25.56±0.65 a	25.56±0.65 a	25.56±0.65 a
0-AF	25.56±0.65 c	27.26±0.49 b	28.81±0.42 a	29.52±1.29 a
1	23.87±0.24 b	24.86±0.49 b	27.26±0.49 a	27.97±1.27 a
2	20.48±1.29 c	23.73±0.73 b	26.41±0.65 a	27.26±0.24 a
3	19.49±2.20 b	21.47±0.49 b	25.14±0.24 a	25.42±0.42 a
4	14.41±0.42 c	16.67±0.98 b	18.36±0.24 a	19.63±0.88 a
5	13.98±1.12 c	15.68±0.73 bc	17.23±0.88 ab	18.36±1.22 a
6	10.88±1.36 b	12.57±0.24 ab	14.27±2.00 a	15.40±0.98 a
7	10.31±1.71 c	11.86±0.73 b	14.12±1.60 a	15.11±1.22 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 25 Effects of ClO_2 fumigation on DHA content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	DHA content (mg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	76.84±0.49 a	76.84±0.49 a	76.84±0.49 a	76.84±0.49 a
0-AF	76.84±0.49 a	75.42±0.73 b	74.15±0.65 c	73.30±1.12 c
1	78.39±0.42 a	77.12±0.85 a	75.00±0.85 b	74.15±1.12 b
2	81.50±1.29 a	78.11±0.65 b	75.28±0.65 c	74.29±0.24 c
3	82.06±1.96 a	80.37±0.65 a	76.69±0.42 b	76.55±0.24 b
4	86.02±1.27 a	83.62±0.88 b	81.36±0.73 c	80.65±1.07 c
5	84.75±1.53 a	83.47±0.42 a	82.06±0.88 b	81.36±1.12 b
6	85.03±0.88 a	84.46±0.65 a	82.63±0.85 b	80.93±0.85 b
7	85.17±1.47 a	83.47±1.53 ab	81.92±2.98 b	80.79±1.29 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 26 Effects of ClO_2 fumigation on ASA/DHA ratio of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	ASA/DHA ratio			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.333±0.010 a	0.333±0.010 a	0.333±0.010 a	0.333±0.010 a
0-AF	0.333±0.010 c	0.361±0.006 b	0.389±0.006 a	0.403±0.022 a
1	0.305±0.004 b	0.322±0.010 b	0.364±0.010 a	0.377±0.023 a
2	0.251±0.020 c	0.304±0.011 b	0.351±0.011 a	0.367±0.004 a
3	0.238±0.032 b	0.267±0.008 b	0.328±0.005 a	0.332±0.006 a
4	0.168±0.007 c	0.199±0.014 b	0.226±0.004 a	0.244±0.014 a
5	0.165±0.016 c	0.188±0.010 b	0.210±0.013 a	0.226±0.018 a
6	0.128±0.017 c	0.149±0.003 b	0.173±0.026 a	0.190±0.012 a
7	0.121±0.022 b	0.142±0.011 b	0.173±0.024 a	0.187±0.016 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 27 Effects of ClO_2 fumigation on GSH content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	GSH content (nmol g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.338±0.048 a	0.338±0.048 a	0.338±0.048 a	0.338±0.048 a
0-AF	0.338±0.048 b	0.398±0.030 b	0.485±0.025 a	0.541±0.036 a
1	0.239±0.032 d	0.330±0.045 c	0.386±0.018 b	0.473±0.007 a
2	0.227±0.021 d	0.278±0.018 c	0.374±0.025 b	0.433±0.025 a
3	0.215±0.024 b	0.258±0.025 b	0.338±0.030 a	0.382±0.032 a
4	0.126±0.019 c	0.182±0.007 b	0.303±0.020 a	0.330±0.012 a
5	0.085±0.011 c	0.148±0.014 b	0.237±0.008 a	0.239±0.010 a
6	0.050±0.014 c	0.101±0.028 b	0.186±0.032 a	0.193±0.008 a
7	0.038±0.018 c	0.082±0.008 b	0.158±0.006 a	0.163±0.016 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 28 Effects of ClO_2 fumigation on GSSG content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	GSSG content (nmol g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.425±0.030 a	0.425±0.030 a	0.425±0.030 a	0.425±0.030 a
0-AF	0.425±0.030 a	0.362±0.018 b	0.346±0.024 b	0.362±0.014 b
1	0.390±0.014 a	0.342±0.014 b	0.322±0.012 c	0.302±0.018 c
2	0.366±0.007 a	0.342±0.025 a	0.306±0.007 b	0.305±0.017 b
3	0.354±0.007 a	0.330±0.014 b	0.290±0.007 c	0.294±0.007 c
4	0.374±0.007 a	0.354±0.007 b	0.294±0.007 c	0.294±0.007 c
5	0.398±0.007 a	0.366±0.007 b	0.358±0.012 b	0.374±0.007 b
6	0.425±0.014 a	0.386±0.025 b	0.378±0.018 b	0.382±0.021 b
7	0.433±0.014 a	0.398±0.007 b	0.390±0.007 b	0.394±0.012 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 29 Effects of ClO_2 fumigation on GSH/GSSG ratio of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	GSH/GSSG ratio			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.800±0.155 a	0.800±0.155 a	0.800±0.155 a	0.800±0.155 a
0-AF	0.800±0.155 c	1.098±0.028 b	1.407±0.129 a	1.494±0.051 a
1	0.614±0.096 d	0.967±0.152 c	1.200±0.094 b	1.569±0.077 a
2	0.620±0.063 d	0.819±0.108 c	1.222±0.103 b	1.417±0.106 a
3	0.608±0.078 b	0.785±0.100 b	1.166±0.126 a	1.299±0.139 a
4	0.339±0.055 c	0.515±0.024 b	1.031±0.093 a	1.121±0.068 a
5	0.215±0.032 c	0.406±0.044 b	0.664±0.044 a	0.641±0.038 a
6	0.119±0.036 c	0.267±0.092 b	0.495±0.107 a	0.508±0.051 a
7	0.089±0.044 c	0.206±0.024 b	0.405±0.022 a	0.415±0.052 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 30 Effects of ClO_2 fumigation on NADPH content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	NADPH content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	43.68±1.21 a	43.68±1.21 a	43.68±1.21 a	43.68±1.21 a
0-AF	43.68±1.21 a	43.56±1.44 a	45.49±4.46 a	46.87±1.31 a
1	41.90±1.70 a	43.65±1.17 a	41.98±0.37 a	43.54±4.74 a
2	42.25±5.04 a	43.94±0.83 a	46.11±1.25 a	43.20±2.66 a
3	40.94±2.79 a	46.14±0.43 a	46.14±5.09 a	44.95±4.66 a
4	38.94±1.33 a	40.61±0.93 a	43.09±0.44 a	44.44±0.91 a
5	38.47±1.08 a	38.75±0.54 a	41.05±4.35 a	41.16±2.37 a
6	37.28±0.67 a	38.86±1.67 a	41.06±4.09 a	39.72±2.27 a
7	37.57±0.99 a	38.97±0.69 a	39.22±2.75 a	39.91±1.51 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 31 Effects of ClO_2 fumigation on $NADP^+$ content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	$NADP^+$ content (μg g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	55.26±0.27 a	55.26±0.27 a	55.26±0.27 a	55.26±0.27 a
0-AF	55.26±0.27 a	53.46±0.37 b	52.52±0.32 c	52.08±0.16 c
1	62.35±0.39 a	57.59±0.51 b	55.12±0.20 c	55.48±0.41 c
2	73.29±0.24 a	60.82±0.30 b	56.35±0.37 c	55.66±0.55 c
3	74.79±0.18 a	72.02±0.18 b	69.49±0.47 c	69.90±0.86 c
4	87.41±0.42 a	80.43±0.49 b	75.73±0.25 c	73.97±0.36 d
5	102.27±3.63 a	94.63±0.88 b	86.98±0.13 c	85.89±0.98 c
6	104.91±2.44 a	98.08±0.15 b	88.33±0.31 c	86.93±0.94 c
7	118.44±7.08 a	99.65±0.54 b	95.17±0.72 b	92.98±1.62 b

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 32 Effects of ClO_2 fumigation on NADPH/$NADP^+$ ratio of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	NADPH/$NADP^+$ ratio			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.790±0.018 a	0.790±0.018 a	0.790±0.018 a	0.790±0.018 a
0-AF	0.790±0.018 b	0.815±0.022 b	0.866±0.083 a	0.900±0.028 a
1	0.672±0.024 b	0.758±0.016 a	0.762±0.005 a	0.785±0.084 a
2	0.576±0.067 c	0.722±0.013 b	0.818±0.022 a	0.776±0.040 a
3	0.547±0.036 b	0.641±0.007 a	0.664±0.069 a	0.643±0.071 a
4	0.445±0.013 d	0.505±0.009 c	0.569±0.004 b	0.601±0.013 a
5	0.376±0.005 b	0.409±0.003 b	0.472±0.049 a	0.479±0.033 a
6	0.355±0.012 b	0.396±0.016 b	0.465±0.047 a	0.457±0.023 a
7	0.318±0.020 b	0.391±0.007 a	0.412±0.032 a	0.429±0.016 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 33 Effects of ClO_2 fumigation on APX activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	APX activity (nmol ASA decomposition mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	463.25±6.24 a	463.25±6.24 a	463.25±6.24 a	463.25±6.24 a
0-AF	463.25±6.24 b	469.09±14.90 b	484.77±11.59 a	497.50±13.53 a
1	470.27±20.95 c	490.29±6.69 b	519.84±8.90 a	529.22±21.61 a
2	478.24±13.41 c	521.91±7.50 b	562.74±14.53 a	581.86±10.28 a
3	321.68±9.26 c	432.56±15.47 b	493.94±15.40 a	505.68±7.71 a
4	270.90±7.18 c	280.14±6.19 c	438.99±3.20 b	485.49±6.74 a
5	215.23±1.26 c	233.54±7.95 c	332.82±2.41 b	356.82±12.92 a
6	209.52±3.31 b	203.41±8.08 b	293.68±3.45 a	307.51±6.00 a
7	198.84±0.68 c	199.98±1.83 c	293.21±1.45 b	314.08±1.38 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 34 Effects of ClO_2 fumigation on DHAR activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	DHAR activity (nmol DHA decomposition mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	24.58±1.64 a	24.58±1.64 a	24.58±1.64 a	24.58±1.64 a
0-AF	24.58±1.64 b	25.12±0.87 b	26.78±1.06 a	27.99±1.01 a
1	23.55±0.37 c	25.84±0.57 b	27.59±0.73 a	28.17±0.21 a
2	21.77±0.11 c	25.93±0.52 b	30.40±0.50 a	31.27±0.44 a
3	13.90±0.38 d	16.11±0.30 c	20.36±1.05 b	24.38±0.45 a
4	11.39±0.63 b	11.65±0.32 b	15.37±0.59 a	15.91±0.10 a
5	10.11±0.29 c	10.84±0.50 c	14.58±0.11 b	15.80±0.20 a
6	8.96±0.21 b	8.49±0.30 b	11.15±0.20 a	10.53±0.20 a
7	7.85±0.46 b	7.22±0.25 b	10.81±0.28 a	10.99±0.14 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 35 Effects of ClO_2 fumigation on MDHAR activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	MDHAR activity (nmol NADH decomposition mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	34.45±0.17 a	34.45±0.17 a	34.45±0.17 a	34.45±0.17 a
0-AF	34.45±0.17 c	37.58±0.61 b	38.05±1.35 b	42.41±0.88 a
1	57.30±1.59 c	67.09±1.78 b	72.80±1.76 a	69.02±0.95 b
2	56.82±0.72 c	68.40±0.57 b	74.21±0.54 a	75.43±0.35 a
3	53.30±0.45 c	63.81±0.98 b	67.94±0.73 a	68.08±0.58 a
4	40.88±1.26 c	46.47±0.79 b	52.78±1.33 a	53.45±0.58 a
5	21.49±1.29 c	25.53±1.42 b	32.02±0.71 a	33.84±0.77 a
6	18.80±0.93 d	23.43±1.01 c	28.92±1.93 b	32.22±1.68 a
7	17.07±1.15 d	21.01±1.02 c	28.31±1.46 b	31.48±1.22 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 36 Effects of ClO_2 fumigation on GR activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	GR activity (nmol NADPH decomposition mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	5.17±0.46 a	5.17±0.46 a	5.17±0.46 a	5.17±0.46 a
0-AF	5.17±0.46 b	6.54±1.18 b	12.16±0.70 a	12.69±0.26 a
1	3.52±0.63 c	6.48±1.02 b	11.59±0.91 a	12.82±0.55 a
2	3.16±0.45 c	4.97±0.30 b	10.72±0.73 a	11.19±0.71 a
3	2.75±0.41 c	3.86±0.30 b	7.08±0.73 a	7.62±0.51 a
4	2.39±0.27 c	3.08±0.69 b	5.59±0.51 a	5.93±0.47 a
5	1.97±0.36 b	2.95±0.34 b	4.11±0.51 a	4.04±0.93 a
6	1.67±0.10 c	2.49±0.41 b	4.04±0.35 a	4.18±0.42 a
7	1.61±0.18 b	1.83±0.11 b	3.44±0.88 a	3.91±0.62 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 37 Effects of ClO_2 fumigation on G6PDH activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	G6PDH activity (nmol NADPH mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.52±0.03 a	0.52±0.03 a	0.52±0.03 a	0.52±0.03 a
0-AF	0.52±0.03 c	0.55±0.02 bc	0.58±0.02 ab	0.60±0.01 a
1	0.48±0.01 c	0.54±0.02 b	0.61±0.02 a	0.63±0.02 a
2	0.48±0.02 b	0.52±0.02 b	0.59±0.02 a	0.61±0.02 a
3	0.43±0.02 c	0.50±0.01 b	0.55±0.02 a	0.56±0.03 a
4	0.43±0.01 b	0.46±0.01 b	0.51±0.01a	0.53±0.02 a
5	0.39±0.02 b	0.41±0.02 b	0.45±0.02 a	0.46±0.02 a
6	0.38±0.02 b	0.39±0.02 b	0.43±0.02 a	0.44±0.03 a
7	0.38±0.01 b	0.39±0.02 b	0.43±0.02 a	0.45±0.02 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 38 Effects of ClO_2 fumigation on 6PGDH activity of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	6PGDH activity (nmol NADPH mg^{-1} protein min^{-1})			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.80±0.02 a	0.80±0.02 a	0.80±0.02 a	0.80±0.02 a
0-AF	0.80±0.02 b	0.84±0.02 b	1.00±0.04 a	1.01±0.04 a
1	0.74±0.02 c	0.82±0.01 b	1.05±0.03a	1.07±0.03 a
2	0.71±0.05 b	0.72±0.03 b	0.93±0.03 a	0.91±0.04 a
3	0.68±0.03 c	0.71±0.02 c	0.84±0.02 b	0.89±0.05 a
4	0.64±0.02 c	0.70±0.01 b	0.74±0.02 a	0.77±0.01 a
5	0.62±0.03 c	0.67±0.02 b	0.71±0.02 a	0.73±0.02 a
6	0.60±0.02 c	0.64±0.02 b	0.68±0.01 a	0.72±0.03 a
7	0.59±0.01 c	0.64±0.02 b	0.68±0.03 a	0.71±0.02 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 39 Effects of ClO_2 fumigation on H_2O_2 content of 'Daw' longan pericarp during storage at 25±1°C (BF, before fumigation; AF, after fumigation)

Storage time (days)	H_2O_2 content (μmol g^{-1} FW)			
	Control	5 mg L^{-1} ClO_2	10 mg L^{-1} ClO_2	25 mg L^{-1} ClO_2
0-BF	0.72±0.37 a	0.72±0.37 a	0.72±0.37 a	0.72±0.37 a
0-AF	0.72±0.37 a	0.65±0.17 a	0.38±0.03 a	0.48±0.12 a
1	1.84±0.20 a	1.50±0.18 a	0.82±0.41 b	0.72±0.00 b
2	2.11±0.17 a	1.84±0.33 a	0.68±0.25 b	0.55±0.21 b
3	2.42±0.30 a	2.22±0.36 a	1.23±0.16 b	1.01±0.24 b
4	3.14±0.38 a	2.63±0.14 a	1.74±0.26 b	1.37±0.25 b
5	3.51±0.33 a	3.21±0.28 a	2.49±0.12 b	2.22±0.21 b
6	4.02±0.15 a	3.79±0.20 a	3.10±0.12 b	3.04±0.30 b
7	4.16±0.34 a	4.03±0.46 a	3.38±0.31 a	3.27±0.27 a

Each value is presented as mean±standard deviation (n = 3).

Different letters in the same row indicate significant difference at 0.05 level.

Table 40 Pearson correlation coefficients of H_2O_2 content, browning index and disease index of 'Daw' longan during storage at 25±1°C

Trait	r value		
	H_2O_2 content	browning index	disease index
H_2O_2 content	1		
browning index	0.928**	1	
disease index	0.813*	0.871*	1

*Significant at $p < 0.05$; **Significant at $p < 0.01$

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