

## **Claims with Substantiation**

## 1) The Ozonator keeps produce fresher longer and prolongs the molding process

Fresh Strawberries were much improved by storage with Ozone. Molding was prominent in the control berries, while the Ozone treated berries still looked fresh and wholesome after storage for 8 Days.

Celery Stalks retained turgidity (firm texture) much better with Ozone. The improvement was very noticeable. Ozone inhibition of potentially harmful black mold on the butt ends was visible.

Cut Cantaloupe shelf life was more than doubled by storage with Ozone.

Whole tomatoes held up well for 8 days without and with Ozone. Texture was slightly firmer in Tomatoes stored with Ozone.

Bananas showed no significant peel color difference with or without Ozone. The peel of refrigerated bananas typically darkens rapidly. Peeled bananas had excellent color and texture after storage for 8 days with Ozone.

The studies conducted are outlined below.

Commercial food products, e.g., Fresh Strawberries in a typical produce vented plastic box, Celery Stalks, Whole Tomatoes, Mixed cut Salad in an open bowl, Bananas, and cut Melon (cantaloupe) were stored and evaluated periodically. Two refrigerators were used. Identical lots of food products were stored, so one refrigerator served as the untreated Control Refrigerator; the other was the Test Refrigerator treated with a Series No. 3 Ozonator placed on the top shelf. The stored food products were visually examined daily, and photographic comparisons were collected as appropriate.



Picture No. 2 Cut Cantaloupe in Refrigerator 3 Days Without Ozone. Note mold spots on cut surface.



Picture No. 3 Cut Cantaloupe in Refrigerator 3 Days With Ozone.

## Shelf Life Test



Picture No. 1 Test Refrigerator fully stocked with Ozonator on Top Shelf, at Start of Study. The Control Refrigerator was stocked in the same manner, without the Ozonator.



Picture No. 4 Cut Cantaloupe in Refrigerator for 7 Days, With Ozone on Left side, No Ozone on Right Side.



Pictures No 5 Celery Stalks Remained Turgid With Ozone (Upper sample), Lost Rigidity After 3 days Without Ozone (lower sample)



Picture No. 7 Butts of Celery Stalks. Left side with ozone remained acceptable for 7 Days; Right side without Ozone for 7 days darkened and showed heavy mold growth.



Picture No. 8 Fresh Strawberries in Refrigerator 7 days. Left Side With, Right Side Without Ozone Blue arrows point to mold growth



Picture No. 9 Fresh Strawberries were Stored in vented Plastic Store Boxes

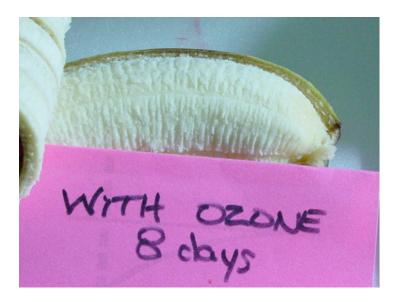


Picture No. 10 Fresh Tomatoes Stored Well With Excellent Color and Surface Appearance for 8 days Without or With Ozone. Fruit Texture was Firmer With Ozone.





Picture No. 11 Fresh Tomatoes Stored 8 days With Ozone (Left) and Without Ozone (Right). Note Bruise developed Mold Without Ozone.



Picture No. 12 Banana Peel Darkened Equally Without or With Ozone. Texture and Flavor of the Fruit Was Excellent After 8 Days With Ozone.

## 2) The Ozonator is very effective at eliminating odors inside the refrigerator

Refrigerator odor reduction or elimination was very effective, with a variety of strongly odorous food products. This claim is well supported by data from a 10-member professional panel documented below.

A panel of 10 food technologists was asked to evaluate the odors from 2 identical household refrigerators that contained portions of fermented meats (salami), unwrapped gorgonzola cheese, unwrapped onions, fresh crushed garlic, cooked cabbage and 4-day old raw chicken parts.

One refrigerator (the Test Refrigerator) was equipped with the 3rd generation Ozonator refrigerator unit. We understand that the unit is designed to operate for 2 hours at full capacity, then modulate, and operate for 10 minutes every 6 hours at a reduced ozone output. After two days, ozone level in the test refrigerator was measured at 0.05 to 0.09 ppm.

Both refrigerators were stocked with the foods 2 days in advance of the Odor panel. The

Ozonator was placed on the top shelf in the Test Refrigerator at start time. Panelists were required to rate the overall odors of the control and test refrigerators on a score of 1 to 5 (1 with the least food odors and 5 with the strongest food odors).

All 10 panelists rated the Test Refrigerator as having essentially no food odors (8 panelists rated 1; 2 panelists rated 2). All 10 panelists rated the untreated Control Refrigerator as 4 (4 panelists) and 5 (6 panelists) indicating strong food odors.

The 2 panelists that rated the treated refrigerator with a score of 2 said they could smell 'something' but not necessarily food odor and not an objectionable odor. All panelists noted a 'clean' smell in the Test Refrigerator when compared to the odors in the untreated Control Refrigerator.

Table 1. Number of panelists<sup>a</sup> rating odor level<sup>b</sup> in refrigerators after storage of strongly odorous foods for two days

Odor rating	Number of Panelists	Number of Panelists
	Without Ozone	With Ozone
1		8
2		2
3		
4	4	
5	6	

<sup>a</sup>Total of 10 judges <sup>b</sup> Odor rated on scale of 1 to 5 (1 no odor, 5 strong odor)

Table 2. Weighted Average Odor Rating<sup>a</sup> in Refrigerators by 10 PanelistsAfter storage of Odorous Foods for two days

Without Ozone	With Ozone
4.6	1.2

<sup>a</sup> Odor rated on scale of 1 to 5 (1 no odor, 5 strong odor)

