



## Introduction

360° Product Testing has been retained to perform comparative testing upon three odor eliminators, as shown to the right. The products to be tested are:

- Brand #1 Room Odor Eliminator,
- Brand #2 (scent type omitted), and
- Brand #3 Natural Odor Eliminator

**Product Images Omitted**

The three products will be tested on Nylon carpet with soured milk.

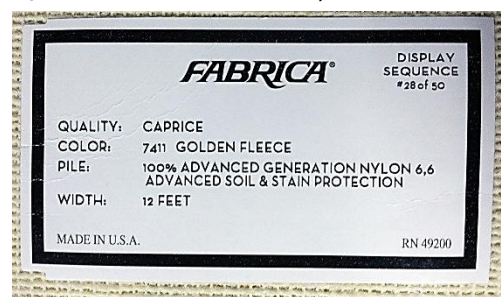
Testing will determine and compare the maximum concentration of odor agent that can no longer be detected when poured over, and allowed to absorb into, a standardized material that has been treated as directed by the tested odor refresher / eliminator.

Testing results follow...

## Soured Milk (garbage odor analogue):

A sour milk solution was prepared by leaving a quantity of milk out of a refrigerator for several days until it produced a pungent sour milk smell. The sour milk was then diluted 1 part water to 1 part sour milk, 2 parts water to 1 part sour milk, 3 parts water to 1 part sour milk, 4 parts water to 1 part sour milk, and 5 parts water to 1 part sour milk. One-half milliliter of each of these five solutions was then placed on each of three equivalent 100% nylon carpeting pieces (Fabrica Nylon 6,6 e.g., <http://www.fabrica.com/forms/productdetails2.aspx?sld=61CS&cld=6109>).

The soiled spots were then each sprayed with one odor treating product. A trained human tester with an acute sense of smell, who was uninformed of the odor treatment types, then sampled each of the soiled spots. In response, the tester offered a Hedonic Tone (HT) rating (Unpleasant -10 to +10 Pleasant) plus an Odor Descriptor (faint to strong) of what was sensed from each soiled spot individually, and later comparatively.



The following shows the test setup for the sour milk smell tests.



Two comparative smell tests were performed: the first was to smell the samples approximately 15 minutes after spraying the odor treatment, and the second was to check the efficacy of the odor removers some 24 hours later. The following tables detail the tester's impression.

Hedonic Tone (HT) and Odor Descriptors: Sour Milk on Nylon Carpet			
Concentration	Brand #2	Brand #1	Brand #3
1:1	HT = - 1   Not unpleasant; sour odor barely detected.	HT = - 7   Somewhat pungent, offensive.	HT = - 5   Smells of strong, sour citrus
1:2	HT = 0   A little more sour than 1:3, but still nominal.	HT = - 4   Easily discerned, unpleasant.	HT = - 4   Easily smells of orange or tangerine citrus and sour milk
1:3	HT = 1   A little more sour than 1:4.	HT = - 2   Moderately strong.	HT = - 2   Stronger than 1:4, can separate odors (citrus & soured milk)
1:4	HT = 4   Mild fragrance smell, faint sour smell.	HT = - 1   Easily recognizable, about same as 3.	HT = - 1   Slightly stronger than 1:5, slight odor
1:5	HT = 7   Mostly fragrance, very faint sour note.	HT = 2   Faint trace of sour milk.	HT = 0   Faint sour milk plus strong citrus.
Additional Comments per Product	2, 3, 4 & 5 have faint sour tone to fragrance; almost nothing from the milk; no recognizable odor.		When very sour, harder to pick out the separate odors as it becomes an overall strong sour.

Hedonic Tone (HT) and Odor Descriptors: Sour Milk on Carpet After 24 Hours			
Concentration	Brand #2	Brand #1	Brand #3
1:1	HT = - 4   Not fragrant, sour milk smell	HT = - 3   Similar to 1:2, but a bit stronger	HT = - 6   Somewhat offensive rotting smell
1:2	HT = - 2   Fragrant, faintly noticeable sour smell	HT = - 2   Faint fragrance, sour, but not strongly so	HT = - 5   Somewhat pungent with citrus smell
1:3	HT = - 1   Fragrant, slightly more sour than 4	HT = - 1   Faint fragrance, somewhat sour	HT = - 3   Citrus with sour milk smell, smells more of sour milk
1:4	HT = 0   Fragrant, slightly more sour than 5	HT = 1   Very slightly sour and fragrant	HT = - 1   Some citrus smell, more sour than 5
1:5	HT = 2   Fragrant, somewhat sour	HT = 3   Light fragrance, no sour milk smell detected, nothing unpleasant	HT = 0   Strong citrus, some sour smell
Additional Comments per Product	May have been better when fresh. Odor source now obvious.	More effective than Brand #2 in neutralization of odor 24 hours later. Brand #1 is as least as good as Brand #2 and better than CM. In direct comparison, Brand #2 and Brand #1 are now quite similar.	As citrus smell dissipated, sour smell became stronger and was not neutralized or masked as well as earlier.

While fresh, Brand #2 seemed to do the better job of controlling the odor of sour milk, but after a day of drying and odor-treatment evaporation, Brand #1 seemed more effective than Brand #2. Brand #3 only seemed to mask the odor though distinct odors from the sour milk were still obvious.

## Conclusion

Brand #1 performed at least as well as Brand #2 with sour milk while Brand #3 basically overpowered the sour milk smell with a strong citrus fragrance that did not appear to neutralize the smell.