



Analysis Report - Evidence of Mold & Bacteria in Vehicle Ventilation Systems; Removal/Reduction using MiST™; Comparison Study and; Odor Study



The MiST™ service treats mold, mildew and other micro-organisms by microscopic physical penetration and direct contact, restoring in-car air quality.



This analysis report is to report the efficacy of MiST™ and is presented in three parts:

Part 1 Report evidence of mold and bacteria removal and/or reduction from a vehicle's ventilation system.

Part 2 Comparison of MiST™ to other existing products available.

Part 3 Effectiveness of the MiST™ active odor control inside vehicle ventilation systems and passenger compartments.



Part 1: Evidence of Mold & Bacteria and Result of MiST™ Service

Objective: Provide evidence of mold (micro-organisms) and subsequent removal/reduction using MiST™ from vehicle ventilation systems.

Method:

1. Vehicles that were selected for testing had no previous complaint of mold contamination or foul odor problems.
2. MiST™ Ultrasonic unit was filled with distilled water Before the treatment and operated for 14 minutes as per normal procedures. Runoff water was then collected from the vehicle evaporator drainpipe.
3. Six drops of the contaminated, Before treatment, water collected were placed on sterile media plates, prepared by Gelda Scientific. The plates were stored at room temperature and photographed after 4 days.
4. The MiST™ Ultrasonic unit was then filled with MiST™ cleaning solution and operated for 14 minutes as per normal procedures on the test vehicle.
5. The vehicles were then driven under normal conditions for 2 days. The MiST™ Ultrasonic unit was filled with distilled water and operated as per normal procedures. Then a second, After treatment, sample was collected from the evaporator drainpipe and six drops of, After treatment, water were placed on sterile media plates. The plates were stored at room temperature and photographed after 4 days.
6. The Before treatment and After treatment sterile media plates are then compared for mold and bacteria growth.

Equipment:

MiST™ Ultrasonic Cleaning Unit
 MiST™ Cleaning Solution
 Sterile Media Plates from Gelda Scientific
 Pipettes
 Digital Camera

Vehicles Tested:

2004 Porsche
 2002 VW Jetta
 2001 Toyota Corolla
 1999 Honda Civic



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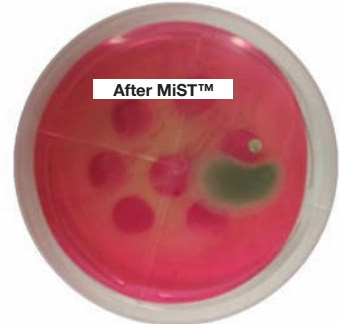
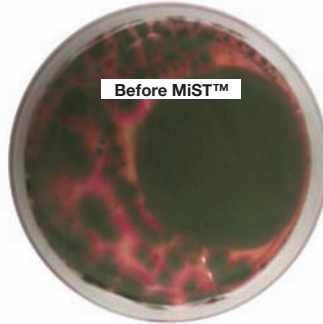
Part 1 Observations: Petri dishes showing mold before and after MiST™ service



2004 Porsche equipped with cabin air filter (29,000 km/18,000 miles)



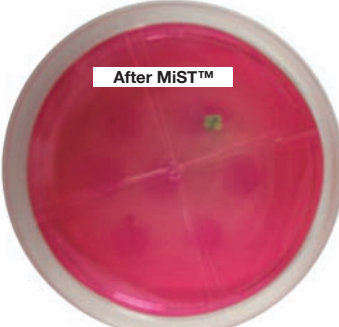
2002 VW Jetta equipped with cabin air filter (58,000 km/36,000 miles)



2001 Toyota without cabin air filter (198,000 km/123,000 miles)



1999 Honda Civic SIR without cabin air filter (119,000 km/74,000 miles)



Part 1 Conclusions: The observations confirm evidence of mold in all of the test vehicles ventilation systems. Samples taken 2 days after running the MiST™ service demonstrate that none or very little mold is present in the ventilation system.



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Part 2: Comparison of MiST™ to other Existing Products Available



Objective: This study is intended to compare mold (microbial) removal or reduction in comparison to existing competitive products.

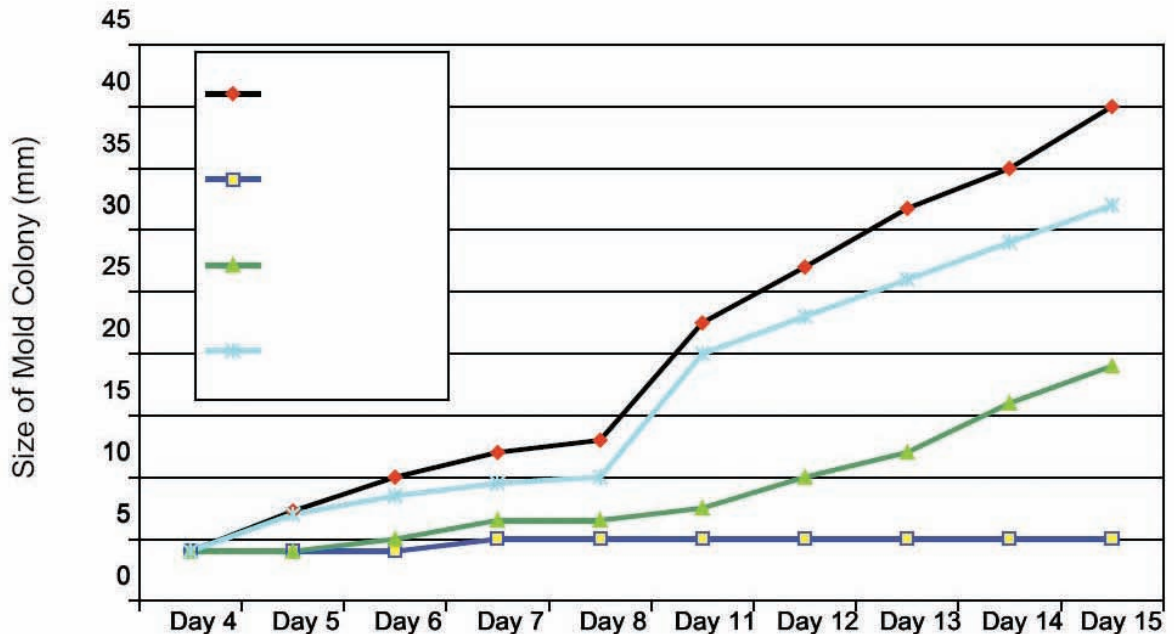
Method:

1. Mold Plates were prepared by Gelda Scientific containing mold spores. The mold spores were allowed to grow for 4 days before they were treated.
2. 10 ml of the Febreze®, Wynn's® Airco Clean new biodegradable formula and MiST™ Cleaning Solution were poured directly onto a mold plate and allowed to soak the mold spores for 10 minutes and then poured off. One mold plate was not treated and used as a control.
3. After treatment, the mold plates were stored at room temperature. Digital photographs of the mold were taken at 5, 8 and 15 day intervals. The sizes of the mold colonies were charted (see graph below).

Equipment:

- Wynn's® Airco Clean Solution
- MiST™ Cleaning Solution
- Febreze®
- Mold Plates from Gelda Scientific
- Digital Camera

Rate of Mold Growth Direct Contact





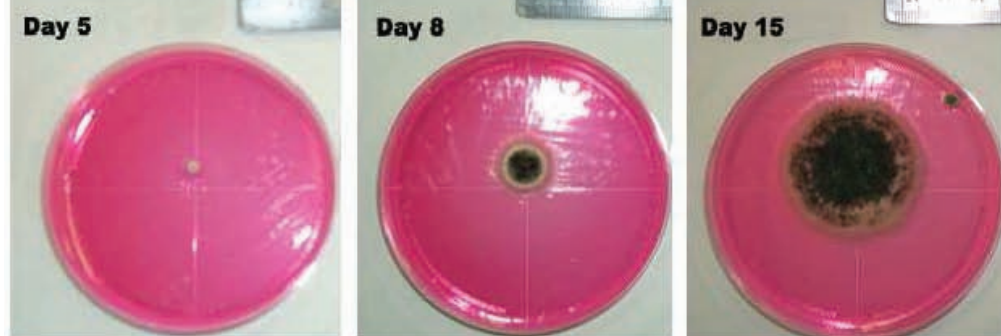
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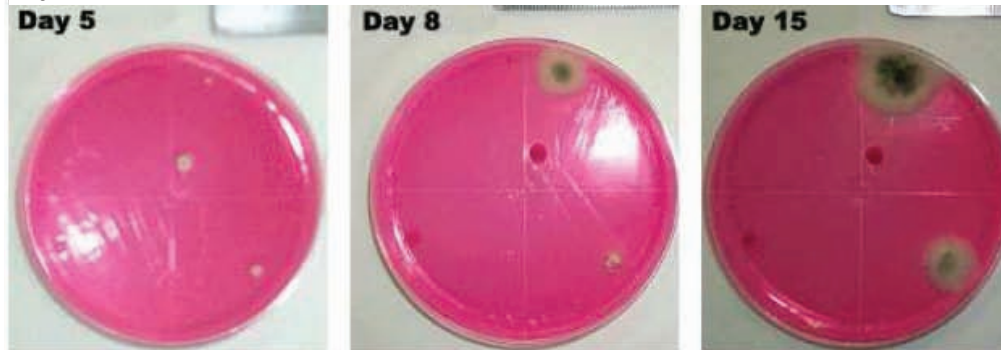
MiST™
In-Car Air Quality Service

Part 2 Observations: Petri dishes showing mold growth at 5, 8 & 15 days

Control - Untreated Mold



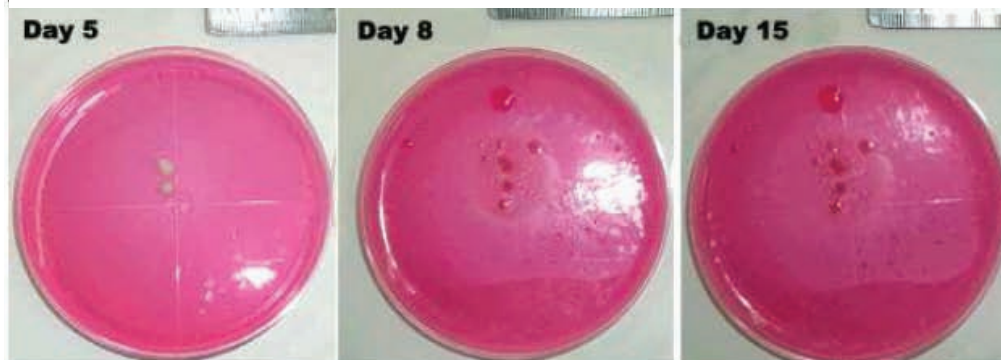
Wynn's® Airco Treated Mold



Febreze® Treated Mold



MiST™ Treated Mold



Part 2 Conclusions: The MiST™ cleaning solution demonstrated no mold growth over the 15 day reporting period. The Febreze® and Wynn's® solution demonstrate only a slight reduction in mold growth as compared to the control.



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Part 3: Effectiveness of the MiST™ Active Odor Control



Objective: Provide evidence of the effectiveness of MiST™ as an active odor control for vehicle ventilation systems and passenger compartments. *Note this test is very subjective because of varied olfactory sensitivity, measures were taken to take this into account.*



Method:

1. Vehicles that were selected for testing had complaints of malodor problems.
2. Each vehicle was tested for malodor presence by two technicians to validate level of unpleasant smell.
3. The MiST™ Ultrasonic unit was then filled with MiST Cleaning Solution and operated for 14 minutes as per normal procedures on the test vehicle.
4. The vehicles were then tested for malodor presence and if odor was still present a second MiST™ treatment was performed as per Step 3.
5. The vehicle was tested again for malodor presence by two technicians to validate level of unpleasant smell.
6. Owner of the test vehicle was asked to evaluate presence of malodor.

Equipment:

- MiST™ Ultrasonic Cleaning Unit
- MiST™ Cleaning Solution

Vehicles Tested:

- 2001 Ford Focus
- 2005 Kia Sorento
- 2002 Saturn
- 2004 BMW

Part 3 Observations: Olfactory test results by two technicians and vehicle owner

2005 Kia Sorento	After MiST™ service
Presence of moderate cigarette smoke odor was evident.	No evidence of cigarette smoke odor was detected by the two technicians or owner of the vehicle.
2004 BMW X5	After MiST™ service
Presence of moderate musty malodor from the ventilation system was evident.	No evidence of the musty odor was detected by the two technicians or owner of the vehicle.



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Part 3 Observations: Olfactory test results by two technicians and vehicle owner

2002 Saturn	After MiST™ service
Presence of heavy cigarette smoke odor was evident.	A slight evidence of cigarette odor was present. Cigarette ashes were emptied and ashtray was cleaned. A second MiST™ service was completed. No evidence of cigarette smoke odor was detected by the two technicians or the vehicle
2000 VW Jetta	After MiST™ service
Presence of moderate human perspiration and body odor was evident	No evidence of human perspiration or body odor was detected by the two technicians or the vehicle owner.
2001 Ford Focus	After MiST™ service
Presence of a very pungent vomit odor was evident.	Some vomit malodor still present. The vehicle was not cleaned thoroughly before treatment. A second MiST™ treatment service was completed and the vehicle was not cleaned. No evidence of human vomit odor was detected by the two technicians or the vehicle owner.

Part 3 Conclusions: The MiST™ service does not mask or cover odors; it destroys odors by breaking down the source at the molecular level. MiST™ is very effective and shows immediate results when used on odors caused by nicotine, human body, animals, mold, mildew, bacteria, food, vomit and most other organic sources.

For extreme odors, it is best to clean the source prior to running the MiST™ service.